The Polygrammaticalization of FINISH in ASL

by

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The sign FINISH occurs in various forms in American Sign Language (ASL). These morphemes are analyzed with regard to their phonological form, syntactic position, and semantic function within the framework of grammaticalization theory, which holds that grammatical morphemes tend to develop over time from lexical morphemes. Verbs, for example, are the source of many tense, aspect, and modality markers. Grammaticalization is viewed as a slow process in which a source lexical morpheme moves through several stages. Often, more than one grammatical morpheme emerges as the development continues, and "links" are formed along the grammaticalization chain. Older forms do not necessarily disappear as newer ones emerge, and thus elements at several stages of development may be found in a synchronic survey of a language. These co-occurring forms can be interpreted as reflecting earlier stages in the dynamic process of language change. At times, a lexical morpheme develops along more than one path, and this is referred to as polygrammaticalization.

In this thesis I discuss previous accounts of time referencing in ASL, in which temporal adverb phrases are treated as the primary means of setting events within some time-frame. It has long been accepted that time adverbs appear in sentence-initial position to set the time reference for the verbs that follow, even for more than one sentence.

I first show that time adverbs can appear not just sentence-initial position, suggesting that a topic-comment analysis can better account for their distribution. Second, I argue that such tense/aspect markers as completive, anterior, perfective, past (and also a conjunction), each related in form and meaning to the verb FINISH 'to finish', are linked along several pathways. By isolating the syntactic and semantic properties of these polysemous morphemes and determining the degree to which each has undergone loss of meaning, I am able to account for some problematic syntactic structures in ASL.

Acknowledgements:

Contents

Chapter 1

Introduction

1.1 American Sign Language

American Sign Language (hereafter referred to as ASL) has only gained recognition as a language since the late 1950s, largely stemming from the work of William Stokoe (Battison 1980). Previous to this, signs were typically thought of as pictures formed in the air with the hands, and certainly not equivalent to the articulation of speech and the complexity of spoken language. But Stokoe began, and subsequently prompted others, to examine ASL as linguistic phenomena, and much work has been accomplished to date primarily on phonological and morphological structures evident in ASL.

There are obvious differences in the application of linguistic theory to sign languages: they are not articulated with speech sounds. The first hurdle to jump in acknowledging ASL as a legitimate language is to accept that some whole system other than the vocal tract is capable and available to produce language conceived and constructed in the brain (Jackendoff 1993). ASL uses the hands as its primary articulators, but facial gestures along with body movements and positionings provide lexical and grammatical information. Further details of how these primary and secondary articulators form the grammatical structures of ASL are given in Chapter 2.

1.2 *The Current Study*

This study focusses on ASL syntax, an area of research still in its early stages. Specifically, I examine elements within the tense and aspect system of ASL related to the verb FINISH or BE.FINISHED. An array of tense/aspect markers are described, and interpreted as evidence of polygrammaticalization, that is, the grammaticalization of a source element along several paths (Craig 1991), producing morphemes more functional than lexical in nature along the way. Prior to this, however, I examine the notion that time referencing in ASL is primarily marked by sentence-initial temporal adverbs, and give evidence that this is not the case. Rather, temporal adverbs are described as but one element in a much more complex tense and aspect system. Finally, I explore the possibility of nonmanual tense markers, although it is evident that these results are preliminary, and in need of much further investigation. The final chapter lists conclusions and research questions as suggestions for future study.

1.3 *Characteristics of ASL Data*

ASL is the sign language used in Deaf[1] communities in much of the United States and Canada, including the Winnipeg area. Language consultants for this study were one female and

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[1] It is common for Deaf persons, who identify themselves as members of a community defined culturally rather than audiologically, to spell "Deaf" with an upper-case "D". Deaf communites are culturally defined by features common to cultures in general: language, rules of behavior, history and traditions, and world view (see, for example, Padden and Humphries 1988).

three male members of the Deaf community in Winnipeg. All grew up in or around the city of Winnipeg, and learned ASL as their first language. Two had Deaf parents, and two were born into families in which there were already at least two Deaf siblings. All four attended the Manitoba School for the Deaf and are now in their late twenties to mid-thirties.

Data was collected from videotapes of two of the consultants signing to other Deaf persons, or in one case, of a consultant signing to the camera, by observation of actual ASL use by consultants, and by direct elicitation. None of the consultants were asked to translate any material from English into ASL, in other words, during elicitation context scenarios were presented in ASL and the consultants were asked to respond in ASL. Some ASL data was taken from a videotape entitled *Building Translation Skills: ASL*, produced by Red River Community College, Winnipeg, for an Interpreter Training Program course of the same name.

1.4 Problems in the Transcription of ASL

To begin the discussion of how time is referenced in ASL, I look at previous descriptions and the problems they raise. But prior to this several more general problems in how ASL can be represented in print must be addressed. Certainly one difficulty apparent throughout the brief history of linguistic description of ASL, and alluded to in 1.1 above, is determining which gestures, either made with the hands or articulated by the face and body, are actually linguistic, and

which are not. For example, most signs are described as having a movement segment,[2] that is, the sign moves from one spatial location to another, and this movement is generally regarded as linguistically significant. But what of the movement that must occur when the hands go from the final location of one sign to a different location for the beginning of the next?

A more difficult question, and one germane to the present study, has to do with facial gestures. When, for example, are raising one's eyebrows or puckering the lips manifestations of an emotional response, and when could they be considered as grammatical markers? This problem is clear, for example, when reading authors who have not taken into account facial and body "nonmanual" markers when recording and transcribing their data, and have concentrated solely on the lexical, or signed, material.

Related to this is the question of transcription. Stokoe, Casterline and Croneberg (1976) designed a writing system in the early 1960s using symbols to represent handshapes, movements and discrete locations, but it has not been widely used by linguists for transcription. Instead, researchers have tended to use English glosses for signs, and other notation systems for features not easily represented by a word or combination of words. Several problems are inherent in this. First, there is no agreement among linguists about

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[2]Details of movement segments are given in 2.2 below.

-4-

which English words are the most appropriate for each sign, resulting in the inability to ascertain which sign is being represented in certain cases. Glosses in some respects are translations, and the translation of signs can be understood differently by various researchers. As well, some signs do not translate easily, and therefore it may be almost impossible to choose a gloss that clearly means (in English) what the sign means to an ASL signer. A good example of this is the sign most often glossed TOMORROW,[3] shown in Figure 1.1. Glosses are given in upper-case. The phrase TOMORROW MORNING has both a literal meaning and the meaning "the next day". In other words, unlike English *tomorrow*, it does not relate to the present moment, but is tied to the time of the event,

TOMORROW

Figure 1.1: The sign TOMORROW (taken from Humphries, Padden and O'Rourke 1980).

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[3]See Appendix 1 for a description of transcription symbols used throughout this study.

whether past, present or future, so that it can indicate, for example, the day immediately following an event that took place a month ago. There are, however, also signs for NEXT and DAY, so if NEXT DAY is given as the gloss instead of TOMORROW MORNING, the reader is faced with not knowing what was actually signed.

A second problem is variability in the notation used to represent nonmanual features. For example, Aarons, Bahan, Kegl and Neidle (1995) represent polar questions with the notation "y/n" as in (1). Most typically, but again, not practiced by all researchers, is the notation of placing the nonmanual symbol above a solid line which indicates the scope of the nonmanual marker. The nonmanual marker is held for the entire constituent underneath the line.

$$\overline{}^{\text{y/n}} \quad \overline{}^{\text{y/n}}$$
(1) IX$_i$ CAN LEAVE, CAN IX$_i$ (1995:235)[4]

    Can he leave, can he?

Valli and Lucas (1992) use the notation "q" for the identical nonmanual, as in (2).

$$\overline{}^{\text{q}}$$
(2) MAN HOME

    Is the man home?

Others, such as Isenhath (1990), simply use a question mark at the end of the sentence, thereby not specifying the actual

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[4]This is in fact a good example of variation in notation of lexical signs as well. Aarons et al. use IX to indicate a pronominal (literally a point with the index finger), whereas it is more common to use the notation PRO.3 (for 3rd person).

nonmanual marker, even though polar and wh- questions have quite different nonmanuals to mark them. This means that if the nonmanual markers are not specified, the reader is not able to know if they are present or what they might be, and if they are specified, the reader must learn the transcription system used by that author.

These problems are not resolved in this study, although I have attempted to make the reader's task somewhat simpler by supplying diagrams for some key lexical items, by employing Liddell and Johnson's (1989) phonological feature charts to indicate important features of the segments of some signs, and by adopting the most commonly used notations for elements in the example sentences. These are listed in Appendix 1.

1.5 Problems in the Description of Time Referencing in ASL

Early discussions of how time is marked in an ASL sentence have concentrated on two phenomena, the so-called time-line (or time plane) and the positioning of temporal adverbs (Friedman 1975, Cogen 1977, Frishberg 1979, Baker and Cokely 1980). According to each of these accounts, tense is not marked on the verb in ASL, but is determined either by a reference to some point along the time-line or the positioning of a temporal marker at the beginning of the sentence.

Of significance are claims made by, for example, Friedman (1975) and Cogen (1977), and echoed by more recent authors (Isenhath 1990, Humphrey and Alcorn 1994), that once a temporal reference is made, all subsequent discourse refers to

that period of time until a new reference is indicated. In other words, a temporal adverb placed sentence-initially orients the addressee to the time-frame indicated by the adverb, for example YESTERDAY or LAST.WEEK, and no tensing is required on subsequent verbs. This is not the case for English, as the suffix -ed in (3) exemplifies.

(3) Yesterday I walked home through the park.

The notion that ASL might be a "tenseless" language is not in itself problematic, although such languages may be rare. Comrie (1985) discusses Burmese (Burma) and Dyirbal (an Australian language of northern Queensland) as lacking tense marking, although this does not preclude the inability of making time distinctions in the language. Burmese, Comrie notes, can mark time references with temporal adverbs, and the time reference of a statement may also be deduced by the discourse participants' knowledge of the world. Thus whether or not a language inflects verbs for tense, time distinctions can still be made. Binnick (1991) suggests that the difference in tensed and untensed languages is not whether a language can make distinctions between time periods, but whether the speaker is required to do so.

The idea of nonmanual markers relating to time is alluded to in Friedman (1975), who suggests that moving the head or body slightly backward indicates a past reference, while moving the head or body slightly forward indicates reference to future time. Friedman is not specific in how such head and

body positioning interacts with other parts of the sentence, for example, if it occurs with other temporal signs or with the verb. She does note that changing position, for instance, from slightly backward to upright, which is the neutral position signifying the present, means that subsequent verbs are not understood as past.

Such descriptions of temporal referencing in ASL remain simplistic and unsatisfactory. Explicitly, sentences are grammatical which contradict the claim that temporal adverbs must be in first position. Cogen (1977), for example, includes sentences such as (4) which are in direct opposition to this claim. Examples from the current study show this as well, as in (5).

(4) ASA NOT-KNOW WIFE PREGNANT/ FIND-OUT PAST

TWO-MONTH (1977:209)

Asa didn't know his wife was pregnant until two months ago.

(5) POSS.1 DAUGHTER D-A-N-A$_a$, POSS.3$_a$ FRIEND$_b$, POSS.3$_b$ BOOK,

FINISH $_b$BORROW$_a$ YESTERDAY FINISH

Yesterday my daughter Dana borrowed her friend's book. Both of these sentences have time references positioned post-verbally, and yet it is clear that the event referred to by the verb is understood to take place in past time. This indicates that either what could be called the "time reference first" rule doesn't apply or doesn't exist, or that some other element is contributing to the time reference of the verb. In (5) it could be assumed that FINISH plays such a role, and it

-9-

is this kind of marker that is discussed in Chapter 3 along with an entirely different analysis of the distribution of temporal adverb phrases.

1.6 Definitions

In Chapter 3 I will discuss a number of tense and aspect markers relating to the verb FINISH and its stative counterpart BE.FINISHED. Concise definitions for these tenses and aspects are given here to assist in clarifying the function of each grammaticalized marker as it is discussed. Only those definitions relevant to the grammaticalization of FINISH and BE.FINISHED are included. Definitions for "tense" and "aspect" are taken from Comrie (1985), while definitions of "past" and the various aspects are adopted from Bybee, Perkins and Pagliuca (1994:54-55). Given that tense and aspect are conceptually complex, the following definitions may seem somewhat simplistic, but the purpose of this discussion is not to analyze their semantic complexity, but to find useful meanings to apply to a range of closely related morphemes. Similarly, tense and aspect frequently interact in the same sentence, as in *I was walking*, in which the situation is viewed as imperfective (Comrie 1976) because it does not suggest a beginning or end to the situation of walking, but the activity is also viewed as a past situation because of the past form *was*. My primary goal in Chapter 3 is to identify morphemes that carry particular grammatical function. Detailed description of tense and aspect interaction in ASL is

-10-

a topic for further study.

1. Tense: the grammaticalization[5] of location in time, that is, time referencing is expressed grammatically in the language. Comrie discusses three parameters relevant to this definition. These are a) that the tense distinction will be in relation to a deictic centre, whether that centre is the present for absolute tense, or another point in time, in which case tense is referred to as relative; b) that tense places the event previous to, subsequent to, or simultaneously occurring with the deictic centre; and c) that the distance the event is placed from the deictic centre is relevant (Comrie 1985:1).

2. Aspect: the internal temporal contour of a situation (Comrie 1985:6), in other words, an event is viewed in relation to some internal temporal feature rather than in relation to an external point in time.

For example, Comrie suggests that in English, *John is singing* and *John was singing* show a difference in past and present location, and this is an opposition of tense, while *John was singing* and *John sang* is one of aspect (1985:6).

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[5]Comrie uses the term "grammaticalization" to refer to inclusion in the grammar of a language as opposed to contextual or pragmatic features and not in the sense it is used in context of this study, and in grammaticalization theory, which refers to the evolution of morphemes from lexical to functional categories.

3. Completive: 'to do something thoroughly and to completion'.
Bybee, Perkins and Pagliuca (1994:54) give as examples 'to
shoot someone dead' and 'to eat up'.

4. Anterior: the situation takes place prior to a reference
time, but is relevant to the reference time. Anteriors are
frequently referred to as "perfects" but Bybee et al. use the
term "anterior" so as not to confuse the notion with that of
"perfective".

Comrie (1985:32) gives the example *John has broken his
leg* to show that the event took place in the past, but is
still relevant to the present.

5. Perfective: the situation is viewed as temporally bounded,
but the event is reported in and of its own accord, without
particular relevance to any other event, or to the moment of
speaking. Perfective is often an aspect marking discrete
events in narration, and is therefore found in situations
referring to the past. According to Comrie (1976) perfective
aspect treats the situation as a single and "unanalyzable"
whole, without division into any internal phases. Comrie
notes that English does not mark perfective aspect
grammatically.

6. Past: marks an event occurring prior to the moment of
speech. While the meaning of past and perfective may often be
difficult to distingish, as Bybee et al. suggest, Comrie
(1985) argues that perfective aspect implies that the event is

viewed as completed, while the past does not carry this implication.

1.7 Grammaticalization Theory

The basic tenet of grammaticalization theory is that, over a period of time, morphemes that are lexical gradually develop into morphemes that have a functional or grammatical meaning (Bybee, Perkins and Paguliuca 1994).[6] Craig (1991) argues that the grammaticalization of lexical morphemes into free grammatical morphemes is but one type of grammaticalization. A second type does not have lexical morphemes as the source, but free grammatical morphemes, leading to further grammatical morphemes that are bound. According to this distinction, lexical morphemes such as verbs are a source for the first type, and which typically grammaticalize into adpositions and verbal auxiliaries. As an example of the second type of grammaticalization, Craig lists free personal pronouns as sources developing into bound subject and object person agreement markers, and auxiliary verbs as becoming bound tense and aspect markers.

This does not imply that older forms more lexical in nature disappear leaving only the more recently developed, or developing, forms. Rather, as the development proceeds, new forms emerge and co-exist with older forms along what Craig

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[6]Bybee et al., and some others such as Hopper (1991) prefer the term "grammaticization", but suggest that it is a matter of convention, and not indicative of a difference in meaning or perspective of the process.

(1991), Heine, Claudi and Hünnemeyer (1991) and Heine (1993) describe as a grammaticalization "chain". Others have referred to this as a grammaticalization "channel" (Heine and Reh 1984), or a grammaticalization "path" (Bybee et al. 1994).

Heine et al. (1991) characterize grammaticalization as a gradual and continuous process, resulting in morphemes that are not discrete units. That is, grammaticalizing morphemes have meanings that overlap, and exhibit properties of more than one category, and thus can be considered "hybrids". The process may be approached from a synchronic point of view by examining related forms that co-occur in a language, but the process is dynamic, and cross-language analyses sufficiently enable the interpretation of synchronic data as evidence of diachronic change.

Heine et al. (1991) argue that some of the most basic human activities become the source concepts for grammaticalization. When activities and movements, conveyed in the form of verbs, are the source, languages appear to choose from just a small handful. These are, for example, *do/make, take/hold, finish, say, go, come, leave,* and *arrive.* Chaining describes the process of one source leading to an outcome, which in turn becomes the source for another link in the chain, leading to a further outcome, and potentially continuing (Craig 1991). A source concept, Heine et al. and Craig suggest, can lead to more than one grammaticalization category or functional domain, forming a "network of parallel

and interconnected chains (Craig 1991:457), which is given the term "polygrammaticalization" by Craig. Craig's example of polygrammaticalization is from Rama, a Chibchan language spoken in Nicaragua, in which she discusses the verb *bang*, a suppletive form of the verb *taak* 'go', and finds *bang* to have grammaticalized along various chains. One chain, for example, is the grammaticalization of *bang* into a postposition signifying a "goal", then to a proclitic relational preverb *ba-* still indicating a goal, and then to a co-lexicalized preverb *ba-* which combines with other verbs, for example *alpi* 'to look for' resulting in *ba-alpi* 'to find'. A second chain is formed by *bang* grammaticalizing into a postverbal subordinator indicating purpose, and then to a (less common) relational preverb also indicating purpose. Several auxiliary verbs with aspectual meanings are also found.

These various functional morphemes derived from a single verbal source *bang* in Rama exemplify links along several grammaticalization chains, in other words, polygrammaticalization. In the present study, FINISH is the lexical source of a similar complex grammaticalized network of functional morphemes in ASL.

Finally, what principles are at work in the grammaticalization of source morphemes? Terminology varies among authors, as does the number and content of such principles. In this study, discussion is based primarily on the principles and terminology from Hopper (1991) and Heine

-15-

(1993).   The following principles are taken from Hopper (1991:22):

   1. Layering.   "Within a broad functional domain, new layers are continually emerging. As this happens, the older layers are not necessarily discarded, but may remain to coexist with and interact with the newer layers."

   2. Divergence.   "When a lexical form undergoes grammaticization to a clitic or affix, the original lexical form may remain as an autonomous element and undergo the same changes as ordinary lexical items."

   3. Specialization. "Within a functional domain, at one stage a variety of forms with different semantic nuances may be possible; as grammaticization takes place, this variety of formal choices narrows and the smaller number of forms selected assume more general grammatical meanings."

   4. Persistence. "When a form undergoes grammaticization from a lexical to a grammatical function, so long as it is grammatically viable some traces of its original lexical meanings tend to adhere to it, and details of its lexical history may be reflected in constraints on its grammatical distribution."

   5. De-categorialzation.   "Forms undergoing grammaticization tend to lose or neutralize the morphological markers and syntactic privileges characteristic of the

full categories Noun and Verb, and to assume attributes

characteristic of secondary categories such as Adjective,

Participle, Preposition, etc."

To summarize, we see that layering accounts for the synchronic co-existence of a lexical form and its related, but grammaticalized, functional morphemes. This remaining earlier form can be autonomous, and may continue to develop in ways other than the grammatical form that has since emerged from it. Heine and Reh (1984) refer to this divergence as a "split". By specialization, Hopper means that at an early point, a number of elements may be used to perform a similar function, but at a later stage of development, one or a few forms tend to take over to the exclusion of the others. Persistence is evident in forms described earlier as "hybrid", retaining some pieces of the original lexical meaning, and having characteristics that cross lexical and functional categories, and thus are not discrete. Heine (1993) suggests that these morphemes eventually become "desemanticized" in that the lexical meaning is gradually lost. Bybee et al. (1994) refers to this as semantic generalization, while Givón (1975) uses the term "semantic bleaching". As meaning changes, related forms are understood to be polysemes (Craig 1991), but the more divergent they become, the less polysemous and more homophonous they are (Heine, Claudi and Hünnemeyer 1991). Finally, grammatical morphemes become de-categorialized, losing their lexical attributes altogether.

1.8 Summary

This chapter has presented some problems in previous descriptions of time referencing in ASL, which then provide the impetus for the current study. Second, since the ASL data are analyzed under grammaticalization theory, some basic principles of this theory have been outlined.

Chapter 2

A Description of Relevant Structures in ASL

2.1 Introduction and Overview of ASL

American Sign Language has been in use in North America since at least 1816 when Larent Clerc first brought French Sign Language (FSL) to the United States (Frishberg 1975). Woodward (1978), however, suggests that this event was not the beginning of sign language use in North America, but that some varieties must have existed prior to it, and that creolization of existing sign language and FLS is likely to have taken place during the early to mid-1800s. Groce (1985), for example, documents widespread hereditary deafness on Martha's Vineyard with records dating back to the mid-1600s. Records show that sign language was used as freely as spoken language among both hearing and deaf people on the island up until the early part of the 20th century. ASL is now the primary language used by Deaf communities throughout North America[1].

ASL is one of numerous sign languages around the world whose grammar depends on actual, physical space. That is, signs are articulated within a comfortable "signing space" in front of the signer. But further, and more significantly, the grammar of ASL takes advantage of this space, in that over and above the simple articulation of hand configurations and movements necessarily within some spatial area, that space is

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[1]A noteable exception is Langue des Signes Québeqoise (LSQ) situated primarily in Quebec.

used to define, for example, relationships between noun phrases and between temporal relationships. Specific examples are given below.

The data described in Chapter 3 deals with morphological and syntactic elements of ASL. Preliminary to this I include here a description of some more basic and general grammatical features of ASL, beginning with the phonological structure of ASL signs, followed by the morphology of verb classes based on Padden (1988, 1990), the use of space for full nouns and pronominals, and finally the question of word order and topic prominence.

2.2 Phonology: Simultaneity and Sequentiality

Prior to William Stokoe's seminal work on the internal structure of ASL signs, signs were typically thought of as unanalyzable wholes, primarily iconic or pictoral representations shaped by the hands in the air (Battison 1980). Stokoe, Casterline and Croneberg, however, in *A dictionary of American Sign Language on linguistic principles*, published in 1965 (2nd edition 1976), described signs as being systematically built by combining several smaller, in and of themselves meaningless, units within sets he called "aspects". Stokoe (1976:xxix) saw these units as analogous to phonemes in function, but because they were formed visually by the hands and not vocally, he proposed the label "chereme" taken from Homeric Greek and having to do with the hand. It has since been argued that "chereme" is an unnecessary departure from

the more traditional "phoneme" in that phonology has to do theoretically with sublexical units and "phoneme" can be applied to such units whether verbally or visually articulated (cf. Liddell 1984).

Stokoe's primary contribution is that signs are composed of nineteen[2] possible handshape primes[3], twelve location primes, and twenty-four movement primes. Handshapes, locations and movements are combined simultaneously to produce signs. Stokoe et al. composed their dictionary based on each of these primes in turn, designating symbols to represent each of them. These are the tab (tabula) for locations, dez (designation) for handshapes, and sig (signation) for movements. Each prime was assigned a written symbol, and along with a host of diacritics, it became possible to represent ASL in written form. This writing system has never been accepted by either linguists by and large, who may not follow Stokoe et al.'s analysis, or by Deaf communities, the members of which typically have some degree of bilingualism, and it is not adopted here. Nonetheless, the notion of signs being composed of a limited number of phonemes has held, with Stokoe's work spawning many further insights into the structure of sign languages.

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[2]Allophones (allocheres) or sub-primes do exist which makes the actual number of handshapes slightly larger.

[3]Others, for example Klima and Bellugi (1979) and Liddell (1984), use "prime" as a more neutral term. This differentiation, however, is not critical to the present discussion, where "phoneme" is used for the relevant data.

Stokoe's analysis was not concerned with the ordering of units. Handshape, location and movement were considered to be articulated simultaneously, and in fact, the notion of simultaneity in the articulation of signs spilled over from phonetic analysis to morphology and syntax. Klima and Bellugi (1979) describe internal changes made to the movement of ASL verbs designating various aspectual meanings, suggesting that ASL resists affixation that adds segments sequentially in favor of "superimposed spatial and temporal contrasts affecting the movement of signs" (1979:274).

A second example of simultaneity in morphology has to do with spatial verbs as described by Padden (1988, 1990). Padden divides ASL verbs into three classes, "plain" or non-agreement verbs, agreement verbs, and spatial verbs. Non-agreement verbs such as THINK, LIKE, and CELEBRATE tend not to accept affixation, although some may inflect for some aspects by means of a change to their internal movement. For example, continuative aspect is indicated by a slow, elliptical and reduplicated movement (Klima and Bellugi 1979). Agreement verbs such as GIVE, SHOW, and FORCE can be inflected for person, number and aspect, but do not take locative affixes. It is common in ASL to locate subject and object NPs at points, or loci, in the signing space in front of the signer's torso. Once an NP has been given lexically, a single point to an arbitrary locus associates that NP with that locus for the discourse that follows. One way of making further reference

to the NP is by an indexical point to the locus, which functions as a pronominal. Agreement verbs agree with their arguments by beginning their movement at a locus assigned a subject NP and ending their movement at, or in the direction of, a second locus assigned an object NP. Spatial verbs do not inflect for person, number or aspect, but accept locative affixes. A subclass of Padden's spatial verb class are those which take noun-classifier affixes (Supalla 1990). Supalla describes these as verbs having a movement path root, while the handshape is of one of several available (and obligatory for these verbs) classifier morphemes, such as VEHICLE, PERSON or FOUR.LEGGED.ANIMATE.

These classifier morphemes are given the label "affix" by Padden, but the form or position of the affix are not discussed in detail. It is clear, however, that the affixes (handshapes as classifier morphemes) are articulated simultaneously with movement roots as components of a single sign, and that these components are not viewed as sequential morphemes relative to one another. Padden suggests that spatial verbs display "rich combinations of simultaneously occurring locative, nominal, instrument and manner affixes" (1990:123).

In syntax, simultaneity can be illustrated by two elements marked facially. One is a set of adjectives, for example VERY.SMALL and HUGE, articulated simultaneously with the lexical (signed) noun they modify. The second element is

a set of sentence type markers also marked facially, for example Wh- and polar questions, where the particular grammatical marker is held while the entire clause under its scope is signed, rather than being indicated by a morpheme positioned at some point in the linear sentence (Baker and Cokely 1980). A further example of a facially marked sentence type, the topic-comment structure, is explored in more detail below in section 2.3.

Certainly there is an element of simultaneity operating in ASL, perhaps more so than is typical in spoken languages. Nevertheless, there is also a pronounced element of sequentiality, or linearity, in ASL. Most obviously, signs are articulated one after the other[4]. That is, there are limits to the number of morphemes that can be simultaneously articulated. Supalla (1990) gives the example of serial verbs of motion, where two verbs are articulated in sequence even though they describe a single event, because when the signer wishes to include morphemes representing the path of motion and manner of locomotion, a single verb, already obligatorily accompanied by a classifier affix, cannot accept both path and manner morphemes.

2.2.1 The Movement-Hold Model

An approach to the internal structure of signs radically different from that of Stokoe et al. is put forward by Liddell

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[4]Sometimes two signs are articulated one with each hand simultaneously, which means that some degree of simultaneity in this regard still holds.

(1984) and Liddell and Johnson (1989), who, rather than viewing a sign as a bundle of simultaneously occurring phonemes (handshapes, locations and movements), analyze the composition of the sign as a sequential string of segments. That is, they see a sign as having a starting point, a transitional phase which may or may not alter the features within the sign, and an end point. Liddell and Johnson define two classes of segments, movements and holds. This approach is referred to by Valli and Lucas (1992) and herein as the Movement-Hold Model.

The Movement-Hold Model is discussed in some detail here, not only because it provides insight into the segmental structure of ASL signs generally, but also because it becomes a useful tool in distinguishing features of certain signs contained in the data in Chapter 3. Whenever the phonological structure of a sign is critical to its discussion, or when the sign's phonological shape is noteworthy, the Movement-Hold Model will be used to explicate this structure. It should, of course, be obvious that a conventional feature analysis of vocally produced phonetic material will not suffice for a signed language, although the principles behind such an analysis do hold.

Liddell and Johnson (1989) describe segments in sign languages as consisting of a posture of the hand and an activity. An articulatory bundle, having to do with the hand's posture, includes features relating to 1) hand

configuration, 2) point of contact, that is, the location of the hand including the part of the hand oriented toward or coming in contact with the location, 3) facing, which specifies a second location and the features specifying the part of the hand facing that location, and 4) orientation, specifying the plane toward which the palm or other salient part of the hand is facing. The activity feature bundle describes the manner of movement of the hand, if any. Movements, then, are segments "defined as periods of time during which some aspect of articulation is in transition. Holds are defined as periods of time during which all aspects of the articulation bundle are in a steady state" (1989:210).

Liddell and Johnson represent this system of segmentation and feature bundles on two tiers, a segmental and an articulatory tier, connected by association lines, following autosegmental respresentation as discussed in Goldsmith (1976). A generalized Movement-Hold Model representation of a three segment sign given in (1).

(1)

| hold | move-ment | hold |

| posture a | | posture b |
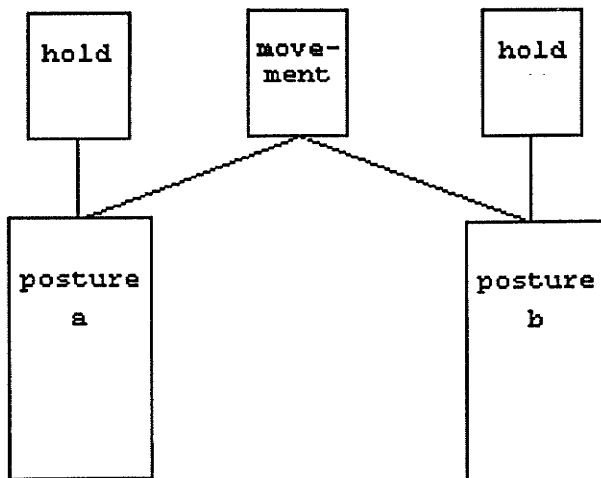
In (1) it can be seen that the segmental tier is above the articulatory tier, that a description of each new posture of the hand is given below the segment at which it appears, and that the posture is connected by association lines to each segment for which it holds true. The Movement segment has association lines drawn to posture "a" under the first Hold and posture "b" under the second Hold because as the Movement begins, it necessarily begins with the same posture as the first Hold, and when it reaches the final Hold, the hand must assume the posture for that Hold. Separate postures, therefore, do not need to be specified for the Movement segment unless, of course, a posture is evident during the Movement that differs from that of either the initial or final Hold.

The level of detail with which Liddell and Johnson describe segmental and articulatory features captures most of the small but critical differences between similar signs discussed in Chapter 3, but not all features addressed in the Movement-Hold Model are pertinent to the description of these few signs. In this section, I address only those features from Liddell and Johnson that are applicable.

2.2.1.1 *Segmental Features*

As these features are described, an abbreviated word or symbol is given in square brackets [ ]. These symbols representing each feature appear in the feature matrix for each sign. I have attempted to preserve as closely as

possible the notation system in place, but deviate minimally when warranted.

a) Major Class

ASL has two major classes: Holds [H] and Movements [M], defined in 2.2.1 above. Holds are always stationary at a given location. Movements may take the form of a path from one location to another, or may involve a distinct change in handshape or palm orientation.

b) Contour

Contour describes the path of movement between two locations. Movements may be a straight line [str], round [rnd], or a seven [7], which is a movement that appears to follow the outline of a "7".[5] [rnd] may be circular or shaped like an arc, in which case it is given the notation [arc]. [str] is considered a "default" contour, because if the hand is located at the inital [H] and then at the final [H] of a [HMH] structure, the path the hand travels is identical to the specified feature [str]. When this is the case, no feature is specified, and it is assumed that the hand moves along a straight path.

c) Quality

A single quality feature concerns this study, that of contact [c]. A [c] occurs when the hand makes contact with another articulator during the course of a movement.

_____

[5]"7" is the label attached to the movement because of its shape. The numerical value is of no consequence.

d) Local Movement

Local movements are not the same as Movement segments, but are small, repeated movements associated with a single segment. One such local movement is wiggling [wg], in which the fingers individually flutter slightly back and forth. Of importance in this study is twisting [tw], in which the wrist rotates slightly and repeatedly.

2.2.1.2 *Articulatory Features*

The articulatory features important in this study are the hand configuration and the point of contact cluster, composed of the location, handpart, proximity, and spatial relation. All possible values are not listed here. Instead, when a feature matrix is given for a particular sign in Chapter 3, it is accompanied by a key explicating the features of the articulatory bundle. As well, if the articulatory features differ for each hand during a two-handed sign, a feature matrix must be given for each hand.

a) Hand Configuration.

Liddell and Johnson claim to have found over 150 hand configurations in ASL. A set of symbols is used to designate each configuration, such as [1] for all fingers closed but the index finger, and [H] for all fingers closed but the index and middle, with these two fingers unspread (i.e., not apart). No semantic content is intended by the hand configuration labels.

b) Location

The location refers to where the hand, as the primary articulator, is situated. This may be in relation to a location on the body, in the signing space around the head and torso, or on the weak hand.[6]

Locations in the signer's space can be proximal [p], a few inches away from the body, medial [m], about an elbow length away, distal [d], about a relaxed arm's length from the body, and extended [e], a full arm's length away. Location in space must also be measured from a midline stretching out from the signer's chest. Signs made at the midline are indicated with a zero [0], those in line with the ipsilateral (same side as the strong hand) breast by a one [1], and those in line with the ipsilateral shoulder a two [2]. Thirdly, location in space must specify a height. These are given in the key for each matrix, but an example would be the shoulder [SH]. Thus, a location at medial distance [m] from the body, on the midline [0], and at shoulder height [SH] would be notated as [m-0-SH].

c) Handpart

The handpart is the part of the hand located at, or most closely associated with, a given location.

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[6]Although some signs are articulated symmetrically by both hands, most are not. It is common to refer to the dominant hand as the strong hand, and the non-dominant hand as the weak hand.
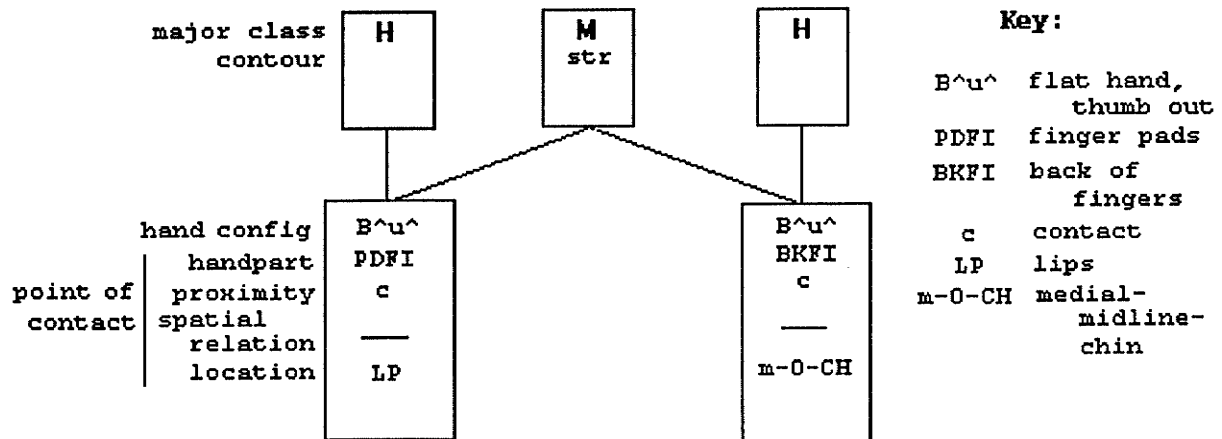
d) Proximity

This refers to how close the handpart is to the location.

e) Spatial Relation

The spatial relation specifies the direction of the handpart in relation to the location. For example, if the hand during an initial Hold is to the side of a location it is about to approach, this slot is labelled "ipsi" (ipsilateral) if it is to the same side as the signer's strong hand, or "contra" (contralateral) if it is to the opposite side.

As an example, (2) gives the feature matrix for the sign GOOD. This is a single-handed sign with a [HMH] (Hold-Move-Hold) segmental configuration.

(2) GOOD [HMH]

				Key:
major class	H	M	H	
contour		str		B^u^ flat hand, thumb out
				PDFI finger pads
				BKFI back of fingers
hand config	B^u^		B^u^	c contact
handpart	PDFI		BKFI	LP lips
point of proximity	c		c	m-0-CH medial-
contact spatial				midline-
relation	——		——	chin
location	LP		m-0-CH	

2.3 Topic-Comment Structure

Some kind of informational coherence must exist between propositions for discourse to be connected (Givón 1984). Information the speaker presupposes the addressee to know, or

information that is already shared by the speaker and addressee is considered "old" information, while "new" information is that which is asserted, in other words, information the speaker does not presuppose the addressee to know. The old, or presupposed, information is the topic of the discourse. Haiman (1978a) describes the topic as something relevant, and therefore extra-linguistic, agreed upon by the speaker and addressee, thereby constituting the framework for the discourse which follows.

Some languages have a grammaticalized topic, which is extra-clausal and may be marked morphologically as topic. This analysis of Mandarin Chinese has been given by Li and Thompson (1976, 1981), who suggest that languages may be subject-prominent, such as English[7], or topic-prominent, such as Mandarin. Li and Thompson present evidence that topics in Mandarin differ from subjects in that they are not required to be arguments of the verb, and that a sentence may have both a subject and a topic. Significantly, topic-comment structure is considered a basic sentence type in topic-prominent languages. Topics in Mandarin are clause-initial, may be followed by a pause, and may optionally be marked with a topic

---

[7]This is not to say that a subject-prominent language cannot mark topics in some way, by for example, clefting, as in (i).

(i) It was Martin who I saw there.

Such sentence structures, however, would not be considered basic in subject-prominent languages.

marking particle. An example from Mandarin is given in (3).
The topic is underlined.

(3) <u>Nèi-chang</u> <u>huǒ</u> xìngkui xīaofang-duì laí
    that-CL   fire fortunate fire-brigade come

         de   kuài (Li & Thompson 1976:462)
         adv.particle quick

    That fire (topic), fortunately the fire-brigade came
         quickly.

Topic-comment structures appear frequently in ASL, and
have been analyzed by Baker and Cokely (1980) and others as a
kind of sentence structure akin to questions and imperatives.
Janzen (1995), however, proposes that topic-comment structures
in ASL are a basic sentence type, and therefore ASL can be
considered a topic-prominent, rather than a subject-prominent,
language.

ASL has been described as having basic SVO word order
(Fischer 1975, Liddell 1980), although a number of other word
orders are possible. For example, it is common to position
both subject and object in loci before signing the agreement
verb, in which case the order would be SOV.

The topic position in ASL, like Mandarin, is clause-
initial and may be followed by a pause. Topics are marked
morphologically by raised eyebrows and a slight head tilt,
although see 3.2.3 below for a discussion of prototypicality
in topic marking in ASL. Topics in ASL are also extra-
clausal, and are not equivalent to the subject in that they
are not required to be arguments of the verb. In fact, a
number of elements can be topics, as will be seen throughout

-33-

Chapter 3, but several examples are given here in (4) to (6).

Nonmanual topic markers have the notation "_____t".

<pre>
    __t _____neg
</pre>
(4) PAT, NOT-HERE   (Baker and Cokely 1980:153)

As for Pat, he's not here/Pat is not here.[8]

<pre>
   _____t _____t
</pre>
(5) POSS.1 DAUGHTER D-A-N-A$_a$, POSS.3$_a$ FRIEND$_{(b)}$ POSS.3$_b$ BOOK

FINISH $_b$BORROW$_a$ YESTERDAY FINISH

As for my daughter Dana$_i$, and as for her friend$_j$, she$_i$
borrowed her$_j$ book yesterday/my daughter Dana
borrowed her friend's book yesterday.

<pre>
    _____t
</pre>
(6) MAN BRING BOOK, DOUBT   (Janzen 1995:68)

As for the man bringing the book, I doubt it/I doubt the
man is bringing the book.

In (4) the topic PAT also appears to be the subject.
Arguments are frequently null in ASL, however, so that a
possible analysis of (4) might be PAT(topic), (PRO.3) NOT-HERE
where syntactically the pronominal is in subject position, and
the lexical item PAT is extra-clausal. In other words, they
are co-referenced, but have different syntactic properties.
This possibility, like many others surfacing in this study, is
left for further research. In (5), we see two topics, not
commonly found in languages, but perhaps it is possible in ASL
to build the presupposed information in several sequential

---

[8]Translations for topic-comment sentences are usually
given first as parallels of the topic and comment
constituents, but because they are understood to be basic
structures in ASL, unlike marked topic sentences in English,
a more equivalent translation is added.

steps. Again, this notion is not addressed further here. What is noteworthy in (5) is that the second topic is neither the subject nor the object of the verb. In (6) the entire subordinate clause is in topic position.

These few examples serve to illustrate topic marking in ASL. As was mentioned, many more examples are listed in Chapter 3. The terms "topic marking" and "topicalization" are used interchangably for the purpose of this discussion, but I make no claims here regarding whether or not constituents move from elsewhere in the sentence into topic position. Rather, it will be assumed that topics appear where they do as part of the basic sentence structure, and sentences in which the same constituent appears elsewhere in the comment have a different sentence configuration.

2.4 Summary of Chapter 2

In this chapter I have outlined some basic grammatical features of ASL that will give the reader sufficient background for the discussion of time referencing in ASL in Chapter 3. I have shown that signs can be analyzed as having a sequential internal structure using the Movement-Hold Model developed by Liddell and Johnson (1984), and outlined briefly the three classes of verbs and some of their morphology from Padden (1988, 1990). Last, I have discussed topic-prominence in ASL, a feature fundamental to the ensuing study.

Chapter 3

The Current Data and Analysis

3.1 Introduction

As stated earlier in 1.5, it has long been assumed that ASL is a language that does not mark tense on its verbs, and instead, that temporal adverbs are positioned sentence-initially to set the time reference for, or "tensing", the verbs that come later in the sentence. In fact, it has been reported that all verbs that follow the lexical temporal reference, even in subsequent sentences, fall under the scope of the given time reference until a new time reference is stated. While it may be that temporal adverb phrases often do appear clause-initially, there are many examples, as will be seen below, where they appear after the verb in a sentence, or where no lexical time reference appears at all, and yet the sentence is clearly situated in a particular time-frame relative to the time of speaking. As such, the above analysis is much too simplistic, and as will be seen, does not in any way account for the structure of many ASL sentences.

This being the case, several questions merit consideration. First, are there in fact other mechanisms, either morphological or periphrastic, that function as tense markers in ASL? It is reasonable to expect that time referencing in ASL is somewhat more complex than has been stated by most authors (cf. Baker & Cokely 1980, Valli & Lucas 1992), especially given that one should be able to, and can,

discuss complex temporal notions such as past in the past, or when discourse moves back and forth between time periods.

Second, if additional tense markers exist, how do these and temporal adverbials interact? In many languages collocation of tense markers and temporal adverbials does occur, but a lack of tense marking alongside lexical temporal adverbials is attested. Comrie (1985) lists Mam (Mayan, spoken in Guatemala and Mexico) and Jamaican Creole (Indo-European roots, spoken in Jamaica) as languages where tense marking is omitted when time adverbials are present in a sentence. For example, in Mam, *ma* 'recent past' and *o* 'past' are sentence-initial tense particles. With the insertion of *eew* 'yesterday' into these sentences, however, the absence of the tense particle is obligatory[1]. Given that temporal adverbials have been the focus of time referencing and "tense" description in ASL to date, is it possible for a situation to exist similar to languages such as Mam and Jamaican Creole?

Third, if temporal adverbs are not required to be in sentence-initial position, what positions can they occur in, and more importantly, what motivates the variation in their positioning?[2]

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[1]Comrie's data come from England (1983).

[2]There are further questions to address, but which are not germane to the discussion in this study. For example, if time adverbs appearing sentence-initially did act to set the time reference for multiple rightward verbs, and it could be shown that such adverbs also occur post-verbally, do the same effects spread leftward? If so, do they have more than one clause under their scope? These are, perhaps, questions for

-37-

In this chapter I first present data in which temporal adverbs do not always appear sentence-initially, and discuss the topic-comment structure of ASL sentences as a motivation in determining their position. I will present data showing that temporal adverb phrases appear in both sentence-initial and sentence-final position, whether or not there is a morphologically marked topic as in (1) to (4), but also that temporal adverbs appear sentence-medially, either in the final position of the topic phrase or in the first position of the comment phrase, when the sentence has topic-comment structure, as in (5) and (6). This medial position does not obtain when the sentence does not have a morphologically marked topic. (1) to (6) thus represents the distribution of temporal adverb phrases in ASL.

                  _____t_____
(1)   YESTERDAY, MAN BRING BOOK

      The man brought the book over yesterday.

                 _____t_____
(2)   MY FRIEND COME WINNIPEG YESTERDAY

      My friend came to Winnipeg yesterday.

(3)   TOMORROW PRO.1 WORK I-T-P

      Tomorrow I work at the interpreter training program.

(4)   PRO.1 WORK I-T-P TOMORROW

      I work at the interpreter training program tomorrow.

----

further study.

<pre>
                                        t
(5) DEAF CAMP MEETING TOMORROW CANCEL
</pre>

As for the Deaf camp meeting tomorrow, it was
cancelled/the Deaf camp meeting for tomorrow was
cancelled.

<pre>
                            t
(6) KNOW-THAT D-L-P TWO.YEAR.AGO ESTABLISH
</pre>

As for the Deaf Literacy Program, it was set up two years
    ago/the Deaf Literacy Program was set up two years
    ago.

Further, I look at a set of tense and aspect markers,
primarily having to do with events previous to a given point
in time, that indicate how ASL marks such notions whether or
not lexical temporal adverbials are present in the clause.
These tense and aspect markers are discussed as members of
grammaticalization chains along several pathways that have the
full verb FINISH as their starting point. Present and future
are not addressed in this part of the study.

Third, I discuss the notion of nonmanual tense marking,
presenting tentative data suggesting that a combination of
certain facial gestures and body postures may constitute
inflectional tense morphology on ASL verbs.

3.1.1 Lexical labels

An inherent difficulty with representing ASL signs on the
written page is clear and consistent notation. Typically ASL
is represented by English glosses that as closely as possible
correspond to the meaning of the sign. Unfortunately, such
glosses give no clue as to the phonological structure of the
sign. Most significant for this study is the sign glossed as

FINISH, described in detail below. As will be seen, there are instances where the sign corresponds to the English verb *to finish*, and instances when this is not the most fitting correspondence. As I progress through the data that follow, I describe the phonological forms of the signs, their functions, and their meanings. FINISH is used as a gloss initially[3], but as each usage is addressed in detail I will suggest a more explicit and specific label, such as FINISH.MAIN, FINISH.AUX$_{(past)}$, or BE.FINISHED$_{(comp)}$, which will then be used throughout the remaining discussion.

Likewise, certain grammatical features having to do with, for example, the position of the head and shoulders, or specific facial markers, appear to contribute significantly to the following discussion of tense and aspect marking. These are not, however, included in the notation of early example sentences below because the significance of these examples lies in other lexical features. But eventually as we need to pay particular attention to these non-manual facial and body gestures, I introduce them into the discussion, and include them as part of the regular sentence gloss.

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[3]FINISH is frequently used as a gloss in examples taken from previous authors, obscuring variations in phonological form and perhaps function. These will not be reanalyzed here, although at times the sentence structure matches that of the current data sufficiently for inferences to be made.

3.2 Temporal adverb phrases in topic-comment structure
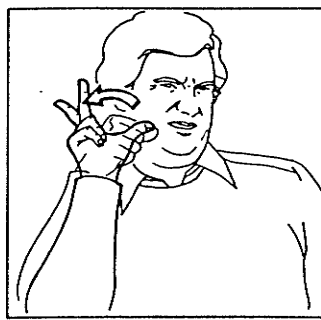
3.2.1 Temporal adverbs in ASL

Temporal adverbs characterize an action, event or state as occurring in relation to a given time or period of time, and as such have the entire sentence under their scope (Givón 1984).

Time marking in ASL has been said to follow a "time line" marked by actual space within the range of the signer's "signing space" (Friedman 1975, Klima and Bellugi 1979, Baker and Cokely 1980), with future time references indicated along a line extending forward from the signer, past references along a line extending back behind the signer, and with the signer's body at the deictic centre, that is, the present. Under this analysis, temporal signs can be shown to be located further away from the body if either more remotely future or remotely past, and located closer to the body if nearer in past or future time.

Some examples of ASL temporal adverbs are YESTERDAY, FEW.DAY.PAST 'a few days ago', LONG.TIME.AGO, TOMORROW, FEW.DAY.FUTURE, and TODAY (or NOW), illustrated in Figure 3.1. ASL makes productive use of what Baker and Cokely (1980) refer to as number incorporation, in which a temporal noun such as WEEK (Figure 3.2a) employs a handshape for a number, such as 'two' or 'three', on the strong hand. In addition, the sign can add a change in movment and location features, either
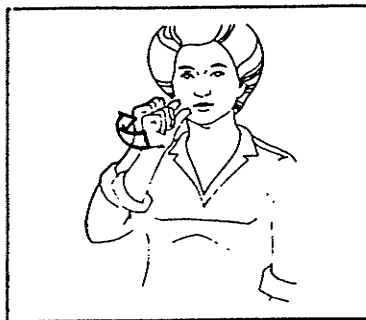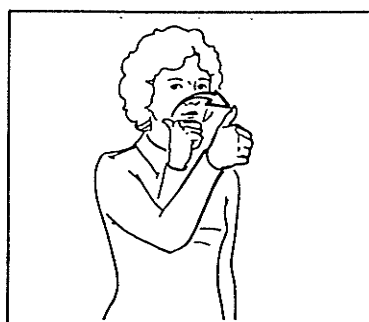
a) YESTERDAY   b) FEW.DAY.PAST   c) LONG.TIME.AGO

d) TOMORROW   e) FEW.DAY.FUTURE   f) TODAY (NOW)

Figure 3.1: Lexical temporal adverbs (a, d, f: Humphries, Padden and O'Rourke 1980; b, c, e: Baker and Cokely 1980).

forward or back, to indicate relation in time to the moment of speaking. Number incorporation and the addition of movement and location features are illustrated by TWO.WEEK.PAST 'two weeks ago' (3.2b) and TWO.WEEK.FUTURE 'two weeks from now' (3.2c). Of course there are other classes of temporal adverbs in ASL, such as adverbs indicating duration like ALL.WEEK 'all week long' and FOR.TWO.DAY 'for two days', but discussion of these goes beyond what is needed to orient the reader to the

basic structure of temporal adverbials for the purpose of the discussion below.

a) WEEK   b) TWO.WEEK.PAST   c) TWO.WEEK.FUTURE

Figure 3.2: Number incorporation by handshape and time reference by movement/location features (adapted from Baker and Cokely 1980).

3.2.2 Adverbs as topics

Given the framework of topic prominence in ASL discussed in 2.3, it seems logical that temporal adverb phrases often appear as syntactically marked topics. As was shown, subject and object NPs can frequently be topics, but other elements can be as well, and time expressions are good candidates. Topic position is reserved for "old" information, or that which the signer presupposes the addressee to have some knowledge about. It is a reference point understood by both signer and addressee, to which some new information is subsequently added. Time expressions, such as YESTERDAY in (1), given again here as (7), and TWO.MONTH.PAST 'two months ago' in (8) act as reasonable, easily accessible reference points between the signer and addressee, in which the signer

-43-

is in effect stating, "once we understand (or are both oriented to) the time-frame I put forward, this is what I wish to say about it".

$$\overline{\qquad\quad t}$$
(7) YESTERDAY, MAN BRING BOOK

The man brought the book over yesterday.

$$\overline{\qquad\qquad\quad t}$$
(8) TWO.MONTH.PAST, PRO.1 $_1$JOIN.TO$_a$ N-A-D$_a$ (Baker & Cokely 1980:402)

Two months ago, I joined the NAD (National Association of the Deaf).

As was seen in 2.3 the topic may consist of a phrase longer than a simple NP or may even be a whole clause, and in this section we see that it may be a temporal adverb phrase. It is common to find a time expression as part of a much longer topicalized element, as in (9), where once again the time expression is clause-initial.

$$\overline{\quad co[4]}\ \overline{\qquad\qquad\qquad\qquad\qquad t}$$
(9) "UMMM" TWO.WEEK.PAST SATURDAY PARTY, #FUN* "WOW"++
(Baker & Cokely 1980:198)

Hey, as for the party two weeks ago on Saturday, it sure was fun/the party on Saturday two weeks ago sure was fun!

---

[4]Baker and Cokely (1980) treat segments such as this as extra-sentential conversational openers meant to gain the attention of the intended addressee. "UMMM" is more like a gesture than a sign, made with one hand extended and the fingers fluttering slightly. While this segment is not critical to the structure of the clause in question (being outside the sentence), it does suggest that the sentence does not occur in the middle of the conversation, but is the opening sentence. As such, the content of the topic has not been previously stated in this discourse segment between the two participants. The signer must be assuming, therefore, that the addressee has prior knowledge of the topic content.

In (9) the temporal adverb phrase TWO.WEEK.PAST SATURDAY is not only contained in the topic, which as a whole is in sentence-initial position, but it is also the first element of the topicalized phrase. Note also that in this sentence the comment consists solely of an adjectival predicate.

3.2.3 *Prototypicality in marking temporal adverbs as topics*

Having said this, it should be recalled that not every sentence in ASL has a morphologically marked topic. Time expressions may appear clause-initially without being marked by raised eyebrows, head tilt, or followed by a slight pause. Examples taken from the literature, such as (10) and (11), have no morphologically identifiable topic marking.

<div align="center">

nod[5]
</div>

(10)   TOMORROW PRO.1 GO-STORE WILL PRO.1 (Valli &
                                          Lucas 1992:266)

    I will go to the store tomorrow.

(11)   YESTERDAY PRO.1 SEE FRIEND (Meier 1990:182)

    Yesterday I saw a friend.

While it may be possible that the reported sentences simply do not include notation for overt topic marking, such sentences do exist. They may, however, be rare. Baker and Cokely (1980), for example, report hundreds of sample sentences in their grammar of ASL, and in almost every case where the sentence begins with a temporal adverb phrase, it is also notated as having topic marking.

---

[5]Valli and Lucas explain WILL as adding emphasis rather than indicating future. I suggest, however, that it is a modal signalling intention.

Two explanations for (10) and (11) may be considered. First, it could be the case, given that not every sentence in ASL has a morphologically marked topic, that in non-topic-comment structured sentences, the first position is syntactically an equally viable position for a temporal adverb to be situated.

The second explanation, and the one adopted here, suggests that full grammatical marking on topics would be the prototypical case, but that sentential elements do function as topics even if they do not receive prototypical topic marking.

For Mandarin Chinese, Li and Thompson (1981) list two formal properties of topics, one obligatory and the other not. Topics in Mandarin are obligatorily in sentence-initial position, but separation from the rest of the sentence by a pause or one of several particles, *a* (*ya*), *me*, *ne* or *ba* , is optional. Li and Thompson refer to these as "pause particles" or topic markers, and suggest that they are not commonly used. In (12) the topic appears without a topic marker, whereas in (13) the identical sentence is given but with the topic marker inserted.

(12)   nèi-zhī gǒu wǒ yǐjing kàn-guo le

that-CL dog I already see-EXP CRS

That dog I have already seen.

(13)   nèi-zhī gǒu $\left\{\begin{array}{l} a \\ me \\ ne \end{array}\right\}$, wǒ yǐjing kàn-guo le

that-CL dog   I already see-EXP CRS

That dog, I have already seen.

As was seen in 2.3 syntactic characteristics, such as how the topic interacts with the verb in the comment (by not being an argument of the verb), are more critical in identifying the topic.

In ASL, Aarons, Bahan, Kegl and Neidle (1992) find the typical brow raise and head tilt topic markers to be optional, along with side to side body shifting and pause breaks. This would seem to indicate then, that elements in both Mandarin and ASL can function as topics whether or not they are accompanied by all or any morphological topic markers, as long as they are in sentence-initial position. In the case of ASL, where various markers are possible but unlikely to all occur together, there appear to be several prototypical topic markers, sentence-initial position, the brow raise, head tilt, and pause break. These are the ones most often mentioned as identifying the topic (see, for example, Baker and Cokely 1980, Baker 1980, Valli and Lucas 1992).

The question of what motivates the presence or absence of morphological topic markers is not one that can be answered here, but is worthy of future consideration. Given the number of options available to ASL signers for marking topics, one could assume that either there are various types of topics each marked in a different way, or that topicality is in some way scalar. Givón (1990), it is intersting to note, rejects the notion of scalar distinctions generally in topic marking,

suggesting instead that in languages which mark topics syntactically, an element is either a topic or it isn't, that is, the contrast is binary[6]. The optionality of morphological markers, whether none, one or several, seems to question such discreteness.

While it is unclear whether or not the situation in ASL suggests any degree of topicality, it would indicate that elements may function as topics without the prototypical grammatical markers. The point to be made here is that sentence-initial temporal adverb phrases are considered topical whether or not they are additionally marked

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[6]The discussion of discreteness versus non-discreteness or scalarity in ASL is interesting on several fronts. Lillo-Martin and Klima (1990) describe the potential for an infinite number of spatial loci available in which to locate indexed pronominal references. Liddell (1990), among others, discusses the interaction of syntactic space and topological space, in which classifier predicates move through space that cannot be said to be divided into discrete units. Second, some signs, such as IMPROVE shown here, appear to have a scalar final location feature at virtually any point along the signer's arm.

IMPROVE (Humphries, Padden and O'Rourke 1980)

Third, nonmanual features for grammatical components such as topic structures are present, perhaps stylistically, on a scale of barely perceptable to very marked. That is, the brow raise may be slight to exaggerated without, according to my consultants, altering the degree of perceived topicality. Further investigation in this area is not the focus of the present discussion, but it is mentioned here because it is an additional dimension of the prototypicality of topic marking morphology.

morphologically. Those not marked morphologically as topics are not viewed as extraordinary, although they do seem to be rarer than those with topic marking, and for our discussion of more prototypically marked phrases, will not be taken to be exceptions in any relevant way.

3.2.4 Temporal adverbs in non-topic positions

The examples in 3.2.2 and 3.2.3 all do support the "time reference first" rule. The time expressions are all sentence-initial, even when other material is present in the topic, and as such, are all preverbal. A problem surfaces, however, because we can find many ASL sentences in which the temporal adverb phrase is not sentence-initial and not preverbal as in (14) and (15). (7) is repeated here for comparison.

<pre>
          _____t
(7)   YESTERDAY, MAN BRING BOOK
</pre>

The man brought the book over yesterday.

<pre>
          _____t
(14) MAN BRING BOOK, YESTERDAY
</pre>

The man brought the book over yesterday.

<pre>
          _____t
(15) KNOW-THAT MEETING W-F-D, EUROPE ONE.YEAR.FUTURE SUMMER
                                          (Baker & Cokely 1980)
</pre>

> As for the World Federation of the Deaf's (next) conference, it is next summer in Europe/the World Federation of the Deaf's (next) conference is next summer in Europe.

In (14) we have a sentence that is the counterpart to (7), this time with the temporal adverb as the comment rather than the topic. Semantically, (7) and (14) convey roughly the same information, but pragmatically, the focus is slightly

different.   In (7) the signer was presenting the new information that the man brought the book over (perhaps the addressee had no idea what happened the day before), whereas in (14), the new information is that the event occurred yesterday (here the addressee knows the book came, but has no idea when). YESTERDAY in (14) appears as the comment because it is the new information.   In (15) the signer presents material, marked as the topic, as information he presupposes the addressee to know. A paraphrase of the topic might be "you know the World Federation of the Deaf's next conference?" as a kind of rhetorical question. The signer's assumption is that the addressee would respond affirmatively (except that the question does not require a response), but would not know when and where the conference is being held, and thus is being told by the signer. It may not be coincidental that such topics resemble questions. Yes-No questions are marked in ASL with a brow raise, widened eyes, the head tilted forward, eye-gaze maintained at the addressee, and often with the final sign held (Baker and Cokely 1980). The basic difference between the nonmanual markers of topics and Yes-No questions, it would seem, is the direction of the held tilt, since raised eyebrows and eye-gaze directed at the addressee are characteristic of topic marking as well[7]. The similarity has

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[7]I am not convinced that "widened eyes" is a distinguishing feature of question marking, but not topic marking, since it appears to be a physiological result of raising the eyebrows and tilting the head forward while looking directly at the addressee.

been noted in other languages as well. In Hua (Gorokan: Papua New Guinea), where topics are grammatically marked, the interrogative -ve is also found as the topic marker, as in (16) from Haiman (1985:37).

(16)   Dgaimo-ve   ugue

        I-interrogative I=will=go

        As for me, I will go.

Haiman (1978) claims that topics resemble questions for Hua speakers, a pause may be given after a topic as a rhetorical device allowing the addressee to assent, and once the addressee's assent is granted, the topic marked NP is understood as a given for both speaker and hearer.

Although there is no verb in the comment of (15), the temporal adverb phrase ONE.YEAR.FUTURE SUMMER 'next summer' is clause-final. ASL does not make use of a copula, but the sentence as a whole does speak about an event taking place, and from the adverb phrase we know it occurs in the future. Sentences (14) and (15), then, show that temporal adverbs can be positioned postverbally and clause-finally, having the verb, or the event if no verb is present, to the left under their scope.

Of additional interest is the sign KNOW-THAT[8] which Cokely and Baker (1980) suggest clearly indicates that the signer expects the addressee to have prior knowledge about the

---

[8]This sign is sometimes glossed KNOW-WELL because the meaning suggests "to know without question".

content of the topic. This sign seems to have grammaticalized away somewhat from the full verb KNOW 'to know' in ASL to mean essentially 'my topic is...', it nonetheless maintains some verb-like qualities, because it can also be used to introduce a Yes-No question as in (17).

```
                             y/n
(17)   KNOW-THAT WOMAN ARRIVE
```

Do you know for sure the woman arrived?

While the future time-frame indicated by the adverbial sequence ONE.YEAR.FUTURE SUMMER in (15) has the event of the conference being in Europe in its scope, the same cannot be true for KNOW-THAT, which speaks to the present.

Sentences (18) and (19), and similarly (20) and (21), are pairs in which (18) and (20) show a temporal adverb in topic position, whereas (19) and (21) are their counterpart in which some other element occupies the topic position and the temporal adverb is positioned in the comment postverbally.

```
              t
(18)   LAST.WEEK, PRO.1 FINISH MEET R-E-G
```

As for last week, I met Reg/I met Reg last week.

```
               t
(19)   KNOW R-E-G, PRO.1 FINISH MEET LAST.WEEK FINISH
```

As for Reg, I met him last week/I did meet Reg last week.

```
              t
(20)   NEXT.WEEK, FUTURE SEE B-I-L-L
```

As for next week, I will see Bill/I'll see Bill next week.

$$\overline{}t$$

(21) KNOW B-I-L-L, FUTURE SEE NEXT.WEEK

       As for Bill, I'll see him next week/I'll see Bill next
          week.

It is clear there are other elements such as FINISH in these

examples that have to do with the time-frame of the event, and

these will be discussed in more detail in 3.4; however, the

focus for the moment is on the position of the adverb.

    (22), repeated from (5), is an additional example which

has two topic positions,[9] and again with a postverbal temporal

adverb, YESTERDAY, in the comment. Note that YESTERDAY is not

sentence-final in (22), but FINISH in sentence-final position

will be discussed in 3.4.4.

---

    [9]That ASL sentences may have more than one marked topic
has been mentioned above. In ASL the possessive is not
expressed as is the English enclitic "'s", but by the sequence

    possesser$_i$ possessive-pronoun$_i$ NP

where the possesser forms a constituent separate from its
possessive pronoun + NP. This is seen in (22) where a
possesser FRIEND is marked as topic, but the possessive
pronoun + NP POSS.3 BOOK is not (also, it is possible for
other elements to come between the possesser and the
possessive pronoun. Another example of sequenced topics comes
from Baker and Cokely (1980:138). Their labels for the two
topics are "$\underline{small\ br}$ (brow raise)" and "$\underline{rh}$ (rhetorical
question)" respectively, but these markers are essentially
identical to topic markers, so I have replaced them with the
standard "$\underline{t}$" in (i).

$$\overline{}t \quad \overline{}t$$

(i) EAT FINISH WHO PAY YOURSELVES

    As for when you've eaten, and as for who pays (the bill),
       it will be yourselves.

```
                          t                    t
(22)  POSS.1 DAUGHTER D-A-N-Aₐ POSS.3ₐ FRIEND₍ᵦ₎ POSS.3ᵦ BOOK
            FINISH ᵦBORROWₐ YESTERDAY FINISH
```

My daughter Dana borrowed her friend's book yesterday. Example (6), repeated here as (23), and (24) to (28), however, show another alternative. With these, the temporal adverb is medial in the sentence, but when the topic-comment structure of each sentence is considered, a pattern clearly emerges. (27) matches the above examples in which the temporal adverb is sentence-initial and in the topic, but is included here as a comparison in the discussion of (28).

```
                        t
(23)  KNOW-THAT D-L-P TWO.YEAR.AGO ESTABLISH
```

> As for the Deaf Literacy Program, it was set up two yers ago/the Deaf Literacy Program was set up two years ago.

```
         t
(24)  I-T-P TOMORROW PRO.1 WORK INDEXₐ
```

> As for the interpreter training program, I work there tomorrow/I work at the interpreter training program tomorrow.

```
              t
(25)  DEAF CAMP TOMORROW MEETING
```

> As for the Deaf camp, the meeting is tomorrow/the Deaf camp meeting is tomorrow.

```
                       t      np      nod
(26)  KNOW-THAT P-A-T, RECENT BUY CAR     (Baker &
                                           Cokely 1980:161)
```

> As for Pat, he just bought a car/Pat just bought a car.

```
                    cond
(27)  SUMMER PRO.1 WORK BUY CAR (Isham & Lane 1994:297)
```

> If I work this summer, I will buy a car.

```
                    cond
(28)   PRO.1 WORK SUMMER, BUY CAR
```

       If I work this summer, I will buy a car.

In (23) to (25) it can be seen that the temporal adverb is positioned after the topic, as the first element of the phrase or clause that forms the comment. Each of these sentences has a counterpart in which the temporal adverb falls sentence-finally, although my consultant often found one or the other preferable depending on the pragmatic context. This would indicate, then, that both first and last position are viable for the placement of these adverbs. In (26) the recent past time reference[10] is positioned similarly at the beginning of the comment. Each of these adverbs must be considered as part of the new information in these sentences.

       In (27) and (28) the time adverb meaning 'this summer' is contained in the protasis of a conditional clause. Conditional clauses in ASL are also marked by nonmanual grammatical markers: brow raise, head tilt (possibly slightly to one side), and an optional pause between the protasis and the apodosis (Baker & Cokely 1980, Valli & Lucas 1992). As with Yes-No questions, I doubt that the similarity in grammatical marking of conditionals and topics in ASL is entirely coincidental. Haiman (1978a) discusses a similar connection in Hua, and in fact, suggests that conditionals may

---

      [10]The sign RECENT, also often glossed as RECENTLY, is usually thought of as a temporal adverb. See 3.5 below for further discussion of near past marking.

universally be considered as a kind of topic. Critical to this discussion is that in (27) the temporal adverb SUMMER 'this (coming) summer' is also the first element in the protasis, while in (28) it is not, appearing instead postverbally. In each case, however, the verb WORK is understood to be a future action, that is, occurring "next summer". Grammaticality judgements of my consultants suggest that (27) and (28) are equally viable, without any change in meaning.

Given the above structure, it is clear that ASL allows temporal adverb phrases to occupy the topic position if they form all or part of the presupposed or reference information, but if they constitute all or part of the new information, they are found in the comment. But given (29) to (33), this does not explain the full distribution, because ASL also has temporal adverb phrases in sentences without morphologically marked topics.

(29) NEXT.WEEK PRO.1 FUTURE SEE R-E-G

   I will see Reg next week.

(30) YESTERDAY PRO.1 FINISH MEET R-E-G

   I met Reg yesterday.

(31) PRO.1 PAST[11] WORK THERE PAST (THREE)[12] THREE.MONTH
(Cogen 1977:205)

I was working there three months ago.

_____nod
(32) ₐJOHN ₐFLY_b ᵦCALIFORNIA LAST.WEEK.   ENJOY SUNBATHE+++
(Lillo-Martin 1986:421)

John flew to California last week.   (He's) enjoying a lot
of sunbathing.

(33) PRO.3 WILL MOVE TEXAS NEXT.WEEK   (van Hoek 1992:194)

He's going to move to Texas next week. (translation mine)

In (29) and (30) the temporal adverbs are in first position,

but are not marked as topics.   In (31) Cogen does not mark any

element as topic, and although none of her examples indicates

nonmanual marking, we can assume that (31) has no

morphological topic marker since the sentence is grammatical

without it.   In (31) the temporal adverb THREE.MONTH 'three

months (ago)' is sentence-final.   Lillo-Martin gives (32), and

van Hoek (33), also in which no topics appear, and once again

the temporal adverbs are postverbal.   This shows, then, that

temporal adverbs can be clause-initial or clause-final with or

without nonmanual topic marking in the sentence.

What, then, is the case for clause-medial temporal

adverbs in sentences without nonmanually marked topics?   While

---

[11]Cogen describes this sign as "a flat open palm, facing
backward, motions over the shoulder toward the space behind
the ear" (p.198), different from the sign inidcating 'past'
described in the present study.

[12]Cogen describes this as an isolated sign preceding
THREE.MONTH, perhaps to signify emphasis.

it has been shown that these adverbs can appear clause-initially and clause-finally, (34) to (37) show that medial positions are disallowed.

(34) a. $\overline{\text{I-T-P}}^{\text{t}}$ TOMORROW PRO.1 WORK INDEX$_a$

  b. *I-T-P TOMORROW PRO.1 WORK INDEX$_a$

(35) a. $\overline{\text{DEAF CAMP}}^{\text{t}}$ TOMORROW MEETING

  b. *DEAF CAMP TOMORROW MEETING

(36) *PRO.1 WORK TOMORROW I-T-P

(37) *PRO.1 TOMORROW WORK I-T-P

These examples make clear that morphologically marked topics have some effect on the positioning of temporal adverbs, because (34a) and (35a) allow the adverb to occur as the first element of the comment, but as in (34b) and (35b), the same position when the first constituent is not marked as topic is not grammatical. (36) and (37) additionally support that in non-topic-comment sentences, medial positions are not viable for temporal adverbs.

Important here is that there are options open to the ASL signer for positioning lexical time adverbs, that is, the "time reference first" rule does not hold, and leftward verbs are in fact under the temporal scope of the adverb. Interestingly, some of the same authors who state the "time reference first" rule, such as Baker and Cokely (1980) and Cogen (1977) also give examples without explanation in which the temporal adverb is sentence-final.

Several additional rather interesting examples further illustrate the claims above:

(38) FINISH MEET R-E-G

    I met Reg.

$$\underline{t}$$
(39) PAPER, (PRO.1) FINISH PUT$_a$

    As for the paper, I put it down/I put the paper down.

(38) and (39) are interesting because no adverbial phrase to indicate time appears at all. Instead, another element, labelled here as FINISH, and discussed further in section 3.4, sets the event in the past. This suggests that mechanisms must be operational in ASL sentences as part of a tense or time referencing system other than simply the position of temporal adverb phrases.

3.2.5 Implications

So far we have seen that topic-comment structure plays an important role in the syntactic distribution of temporal adverb phrases in ASL. Temporal adverb phrases occur

a) as the sole element in a grammatically marked topic, as in (1) and (8);

b) as the first element in a phrase or clause in topic position, as in (9);

c) postverbally within a longer phrase or clause in topic position, as in (5);

d) as the sole element of a comment, as in (14);

e) either preverbally, as in (23), (24) and (25), or postverbally, as in (2) and (15) in a comment; and,

-59-

f) preverbally, as in (3), (29) and (30), or postverbally, as in (4), (31) and (32), but not sentence-medially, in a non-topic-comment sentence.

This variation indicates that the ordering of temporal adverb-verb is not as restricted as has previously been described. The lexical time expression can in no way be said to "tense" verbs solely in a right-ward direction. Therefore, if the function of the temporal adverb was actually and primarily to situate verbs in a given time-frame, it would have to be the case that the adverb affects verbs both to its right and to its left.

An alternative, and stronger, view, and the one put forward in the present study, is that temporal adverbs do not function primarily to situate the verb within a *general* time reference such as the past, but rather function to specify a particular instant or period of time within a more general time-frame (e.g. specifically at the point of *yesterday* within the general reference time of past). This would then, of course, mean that the general time reference must be indicated in an alternate way, illustrated in part by (38) and (39), or at least, that lexical time adverbs are but one part of a larger system of time referencing in ASL.

As will be seen below, there are clearly some additional grammatical features of ASL sentences that serve to reference events in time. But prior to moving to this discussion, I would like to make a final claim regarding the positioning of

temporal adverbs. Rather than the "time reference first" rule, I would suggest that the positioning of temporal adverbs is primarily a function of the topic-comment structure of ASL, which has topics as elements in its basic sentence structure. As has been stated, temporal adverbs introduce easily understood reference points for the signer and addressee from which the signer may advance information previously unknown to the addressee. However, when the time reference forms, or is included in, the comment, it is understood as information that is being advanced as new. It would therefore appear that in clearly marked topic-comment sentences, the positioning of the temporal adverb is a function of topicality.

Of course, this does not necessarily explain what determines the greater restriction on the position of temporal adverbs in non-topic-comment sentences. Recall that overt topic marking may be the prototypical case. It is conceivable that elements unmarked as topics, but positioned at or near the beginning of a clause are understood to be presupposed or old information, while those positioned later in the clause represent new information. In the topic-comment structures above, when temporal adverbs were in a medial position, it was either at the left boundary of the topic, or the right boundary of the comment. It could be the case that initial and final positions are the primary positions for temporal adverbs to be situated in, and that prototypically marked topic-comment structures provide a sufficient juncture between

the topic and comment constituents so as to allow these extra

two positions. Non-morphologically marked topics, even though

marked iconically through word order, however, would not be

strong enough syntactically to allow these sentence-medial

temporal adverbs.

3.3 *Time Referencing at the Discourse Level*

Lexical time references do not appear frequently in all

ASL discourse. If asked, many ASL signers will comment that

you just know the time-frame by what's being talked about.

That is, in general, the sense is that the discourse context

is a factor that can help the addressee determine when the

event being discussed takes place. Of course, narrative

discourse usually involves events that have taken place

sometime in the past. It is during such narrative that many

of the morphemes discussed below tend to turn up less

frequently, and where events most often are told more or less

in chronological order.[13] On the other hand, during

conversational interchange, when the events and activities

being discussed tend to be more immediately relevant, the

potential for time references to jump back and forth is much

greater. It is with this type of discourse context that

signers may wish to frame events in general terms, that is,

the simple past, the present, and the future, without

specifying exactly when they occur using temporal adverbs such

---

[13]In light of the discussion in Chapter 3, however, this
would seem to merit revisiting.

as TOMORROW AFTERNOON, TIME.FOUR (four o'clock), or THREE.DAY.PAST (three days ago). Such frequent shift of time reference may be either in absolute terms relative to the time of speaking, or in relative terms, that is, relative to period of time other than the time of speaking.

The present discussion does not examine pragmatic features of ASL discourse relating to time referencing, but rather looks at the structural features of morphology and periphrastic expressions within the clause. But an example of a shift in time reference during a narrative by topic marking is given in (40) and (41):

(40) (POSS.3) SON, BROWN HAIR, $\overline{\text{BORN}}^{\text{t}}$ BLOND

> Her son has brown hair, but as for when he was born, it was blond.

(41) SEE$_a$ (POSS.3) SON LAST.YEAR, BROWN HAIR, $\overline{\text{BORN}}^{\text{t}}$ BLOND

> I saw her son last year and he had brown hair, but as for when he was born, it was blond.

In (40) the signer mentions a present state, that of her friend's son's hair color, and then speaks about an earlier (past) event, indicated by a topicalized clause. In (41) the signer refers to an event taking place sometime before the time of speaking. When she wishes to make reference to an even earlier event, this clause is again marked as a topic. In both instances the topic marking is accompanied by the shoulders and chin moved slightly back, which is indicative of the morphology discussed below in section 3.5. Thus it is the

case that ASL makes use of topic-comment structure as a syntactic rather than a lexical means to indicate shifts in time reference. Further investigation, much beyond the scope of this discussion, is required to elucidate this function of topic-comment structure in ASL.

The remainder of this chapter focusses on lexical and inflectional markers of past time reference in ASL, in which it will be seen that various tense/aspect markers exist that are related in both phonological form and meaning to the main verb FINISH. Semantically, these markers differ from the adverb phrases discussed in section 3.2 in that they do not specify a particular instant or period of time, but rather indicate to the addressee that the event has occurred at some nonspecific time relative to either the time of speaking or to another time reference. As mentioned, the focus will be on past markers, although occasional reference is made to other markers of present and future as data permit.

3.4 *The Grammaticalization of FINISH into Tense and Aspect Markers*

FINISH in ASL has been described as a single sign with a number of varied but related meanings and functions, none of which have been described in detail to date. These are listed below as described by the various authors, along with examples, where available:

a) As a main verb 'finish' taking a clausal complement, or alternatively, a past participle adjective (i.e., 'have finished') taking a clausal complement (Fischer and Gough 1972). Fischer and Gough (1972:2) offer (42) as an example with these two readings.

(42)   <u>   cond</u>
      YOU FINISH EAT, WE GO SHOPPING

      When you finish eating, we'll go shopping/When
          you've finished eating, we'll go shopping'

b) As a perfect or perfective marker (Fischer and Gough 1972, Friedman 1975, Aarons, Bahan, Kegl and Neidle 1992). (43) from Friedman (1975:952) and (44) from Aarons, et al. (1992:122) both have an anterior (perfect) reading.

(43) EAT YOU FINISH?

      Have you eaten?

(44) JOHN PERFECTIVE(FINISH) EAT APPLE

      John has eaten the apple.

c) As a marker of past tense, but only in limited cases when addressing children (Fischer and Gough 1972)[14].

---

[14]Fischer and Gough, in the same article, also comment that FINISH is a perfective marker, and *not* a tense marker.

d) As a completive aspect marker (Baker and Cokely 1980) and as in Valli and Lucas (1992:266).

(45)
$$\overline{\text{nod}}$$
   YESTERDAY PRO.3 WALK FINISH

   Yesterday he did walk!

e) As an emphatic marker (Valli and Lucas 1992)

f) As the imperative meaning "stop that!" (Fischer and Gough 1972, Baker and Cokely 1980).

g) As a marker meaning "that's all" (Fischer and Gough 1972:4) as in (46).

(46) MOTHER SURPRISE, FINISH?

   Is surprising mother all that's going to happen?

h) As a conjunction between sentences (Fischer and Gough 1972, Valli and Lucas 1992). The following example is from Valli and Lucas (1992:266).

                          brow up
(47) YESTERDAY PRO.3 WALK FINISH , EAT PRO.3

   Once he had finished his walk, he ate[15].

   The descriptions in a) - h) represent the relatively superficial discussion of FINISH to date. Fischer and Gough (1972) give the most detail, but inadequately account for the preverbal and clause-final distribution of FINISH. As well,

---

[15]It is not clear why Valli and Lucas have left 'yesterday' out of their translation of (47). Also, the translation gives the impression that FINISH is functioning as a main verb instead of a conjunction as they suggest. Third, note that the nonmanual brow up is analyzed as a topic marker in the present study.

these authors' descriptions do not differentiate between phonological forms discussed in the current study.

Below it will be seen that some significant differences in meaning correspond to variation in phonological forms, first for two forms of FINISH as main verbs or stative predicates (i.e., BE.FINISHED) and second, in their subsequent grammaticalized forms. Under this analysis, the two forms of FINISH must be considered to be distinct lexemes. Phonological structures are given where relevant as defined by Liddell and Johnson's (1989) Movement-Hold Model, described in section 2.2.1 above. The various tense and aspect derivatives of FINISH, along with a description of their phonological, syntactic and semantic forms, are analyzed according to the theory of grammaticalization. It must be considered, however, that this description is in its initial stages, and is synchronic in nature. Diachronic data are not readily available for ASL at this time. Nonetheless, when the form and meaning of various items in the current data are compared, they can be clearly interpreted as links along several grammaticalization chains.

ASL is a relatively young language, with records of its use dating back only to within several hundred years (Frishberg 1975). It has been claimed that within this short time span, at least one major change, a shift in word order from SOV to SVO (Fischer 1975), has taken place. It is assumed here that ASL, like any other language, is continually

in a process of evolution, illustrated by the grammaticalization of some lexical elements into grammatical morphemes.

In the remainder of this chapter, then, I will first show that FINISH in ASL has a set of functions that form a chain along one grammaticalization path beginning with FINISH as a full verb and ending with a phonologically reduced proclitic past tense marker. Next, I describe a second grammaticalization chain beginning again with FINISH, but as a stative verb, through its use as a completive aspect marker, an anterior, and finally to a conjunction. Interestingly, this conjunction can receive topic marking, which syntactically adjoins it the following clause[16]. These grammaticalization pathways are summarized in Figure 3.3 on the following page[17]. Last, I examine a set of nonmanual markers that appear to form a five-way distinction in marking time: remote past, near past, present, near future and remote future. These nonmanual markers appear alongside lexical temporal adverbs and signs such as FINISH and FUTURE (or WILL), but spread to the verb in the absence of other temporally related signs in the sentence.

---

[16]Recall from the discussion above that topics are positioned clause-initially. Further comments regarding this syntactic reanalysis are made in section 3.4.4.2.

[17]The grammaticalization chains outlined in Figure 3.3 are the focus of much of the following discussion, with the chart being described step by step throughout the chapter. It is included here for the reader's reference.

FINISH.MAIN(complete) ——————————————— BE.FINISHED(complete)
          [HMH]   [HMH]
          V+NP   (NP + stative predicate)
           /   \   /   \
FINISH.MAIN(complete)   BE.FINISHED   BE.FINISHED(comp)
      [HMH]   [H]   [HMH]
(V+Clausal   (NP + stative predicate)   (-completive)
   Complement)   FINISH MAIN | |
                     [H]   BE.FINISHED(ant)   BE.FINISHED(conj)
         (V + Clausal Complement)   [H]   [HMH]
                      | (-anterior)   (S + conjunction + S)
                 FINISH.AUX(ant)
                     [H]
                  (AUX + V)
                      |
                 FINISH.AUXr(perf)
                     [H]
                  (AUX + V)
                      |
                 FINISH.AUXr(past)⁻
                     [H]
                  (AUX + V)

Figure 3.3: A summary of grammaticalization chains for FINISH.

-69-
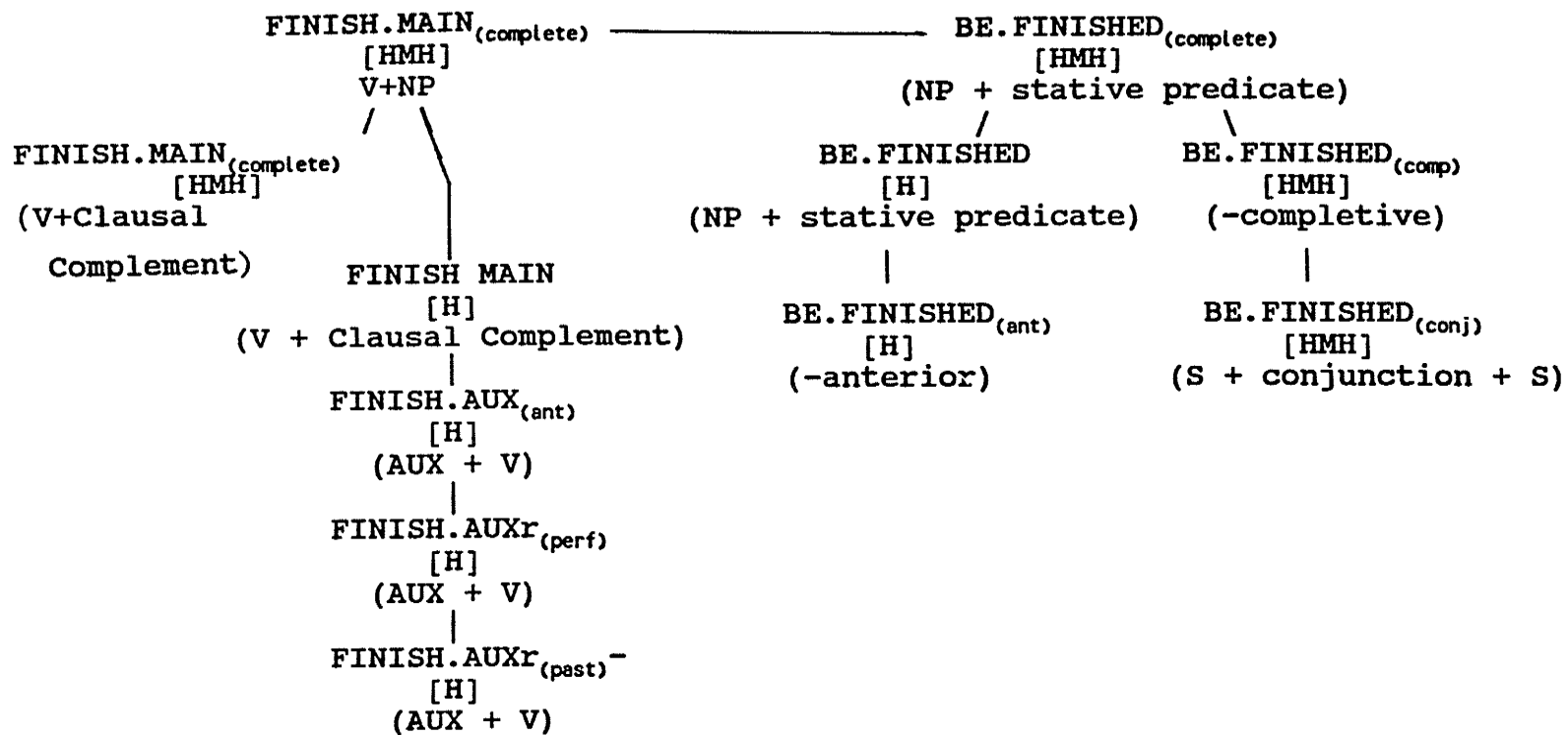
This study thus delineates the role that FINISH plays in temporal referencing in ASL, and posits the necessity of considering a set of nonmanual morphological tense markers.

Since all forms of FINISH I discuss are concurrently in use in modern-day ASL, two tests will help distinguish the various grammatical functions occurring along these chains, and these are described in 3.4.1 below.

3.4.1 Tests to Distinguish Grammatical Function

In addition to the description of phonological form and semantic function, it is helpful to apply several tests to determine constituency. This is especially illuminating in the case of ambiguity when several polysemes of FINISH occupy the same position in the clause, for example, with the morphemes described in section 3.4.4 that appear clause-finally, and where upon examination are seen to behave in some instances as the main verb of their own clause, while in others, as a particle belonging to the clause that immediately precedes it.[18]

3.4.1.1 The Pronominal Insertion Test

Because ASL is an optionally null argument language, pronominals need not be overt in a given sentence. Agreement verbs, defined by Padden (1988, 1990) and outlined in 2.2 above, such as HIT in (48) have inflectional morphology to indicate the arguments, which makes lexical pronominal

---

[18]It is not uncommon for a verb to appear as the sole item in a clause, considering that both subject and object arguments can be null.

indexing redundant, even though such redundancy is not necessarily ungrammatical, as (49) shows.

(48) $_a$HIT$_b$

He$_i$ hit him$_j$.

(49) PRO.3$_a$ $_a$HIT$_b$

He$_i$ hit him$_j$.

The verb HIT plus its argument agreement markers in (48) form a complete clause in which the loci corresponding to subscripts "a" and "b" are associated with an subject "a" and a necessarily different object "b", just as 'he$_i$' and 'him$_j$' in the English translation necessarily refer to two different people. In (49) the subject is overt, that is, an indexical point is made to locus "a". Note that the agreement marker for a subject associated with locus "a" still accompanies the verb HIT.

The situation is similar for non-agreement verbs. An example is the null subject of ENJOY from (32) repeated here as (50), and its corresponding sentence with a 3s overt subject PRO.3 indexed to locus "b" (California) in (51).

$$\overline{\text{\hspace{2cm}nod}}$$
(50) $_a$JOHN $_a$FLY$_b$ $_b$CALIFORNIA LAST.WEEK.   ENJOY SUNBATHE+++

John flew to California last week. (He's) enjoying a lot of sunbathing.

(51) PRO.3$_b$ ENJOY SUNBATHE+++

He's enjoying a lot of sunbathing.

The pronominal insertion test asks whether or not an overt pronominal can be inserted as an argument of the lexical

item in question. If the item is a full verb in its own clause, it should be able to take an overt subject argument. If it is an auxiliary particle, it will not be able to take its own overt argument separate from that of the main verb. In other words, the item is functioning as part of the verb complex, and not separable by its own overt subject. Heine (1993), in discussing the grammaticalization of verbs into auxiliary particles, suggests that in the early stages of grammaticalization, when the item undergoing auxiliarization still functions as a verb, subject reference identity between the verb and its complement clause is not required. That is, the subject of the verb in question and that of its complement need not be the same. In later stages, however, they must be identical. As an example, Heine (1993) cites Bisang (1986:152) for Yabem (Papua Melanesian). In (52) we have a construction of the form "X does Y, it.is.finished" (Heine 1993:38) where "it.is.finished" follows another phrase. The subject of "it.is.finished" is an impersonal 3s, which differs from the subject of 'eat'[19].

(52) bôc seng   aêàcma janggom gê-bacnê

      pig 3p.eat our   corn   3s-be.finished

      The pigs have eaten our corn.

---

[19]Ideally, FINISH and the pronominal insertion test would be tested against the behavior of other auxiliaries in ASL, but the status of such auxiliaries is not well understood, and therefore a more typological approach is taken.

This, then, represents an early stage of auxiliarization.

Heine (1993:38) gives the example in (53) from Ewe (Kwa family, Niger-Congo) as a contrast to (52), in which the verb meaning 'end, to finish' is at a later stage of grammaticalization. It is a completive marker, and has dropped its person and tense inflection.

(53)   me ɖu i   vɔ

     1s eat 3s.0 be.finished

     I have eaten it up.

These two examples illustrate, firstly, that the notion of auxiliary is not a discrete category separate from other full verbs. This idea is developed futher in 3.4.3.2 below. Second, and more important to the present discussion, is that auxiliaries further along the grammaticalization chain lose their ability to function as distinct clauses with their own subject.

FINISH in ASL is a non-agreement verb, but like ENJOY, still may have a null argument as in (54). (55) contrasts with (54) in that the 1s pronominal PRO.1 is overt.

(54)   FINISH

     I am finished.

(55)   PRO.1 FINISH

     I am finished.

No clear difference in meaning is apparent between (54) and (55), although (55) may indicate some emphasis on the person.

The pronominal insertion test is applicable in, for example, 3.4.4 below where FINISH (or BE.FINISHED) appears at the end of a clause. If FINISH is seen to operate as the main verb of its own clause, an overt argument should be possible, even though none would be expected given that ASL is a null argument language. If, however, FINISH is analyzed as an auxiliary at a later stage of grammaticalization, overt pronominal insertion should not be possible.

3.4.1.2 *The Stress/Reduction Test*

Katamba (1989) describes prosodic stress in spoken languages as a perceptual phenomenon, a question of auditory prominence or salience having to do with pitch, duration, and loudness. Prosodic stress in ASL has not been studied to much extent, although in one recent study Coulter (1990) compared structural features of signs given emphatic stress by the signer with the same signs in non-emphatic contexts. Coulter found that such features are easily observable but difficult to define. For example, even though the duration of a sign may be expected to increase when signed emphatically, Coulter found that in some instances the sign was lengthened, but in others it was shortened (presumably the movement was quicker). Coulter suggests that signs receiving emphatic stress are typically made larger than their citation forms, but also that such signs may appear larger because of increased horizontal displacement (the movement itself is not larger, but rather, the same-sized movement is articulated with the hands wider

apart along a horizontal plane) and height displacement (the sign is made higher up).

Although the present study does not seek to determine further the characteristics of emphatic stress in ASL, it is apparent that when FINISH is signed, there is variation in the amount of stress the sign receives[20]. We are not only looking for additional phonological stress due to emphasis of the sign here, but also at the difference between the normal stress FINISH receives as a full verb and the reduction of phonological stress in instances where FINISH has undergone auxiliarization. In its most reduced form, FINISH appears to cliticize to the verb to its right, being articulated at or near the same location as the verb rather than at the location in neutral space where it typically is positioned as a full verb, the weak hand being dropped altogether, the internal movement of the sign reduced to a small single twist of the wrist, and the final hold of FINISH along with the initial hold of the verb that follows it being deleted.

Under the Movement-Hold model, the full verb FINISH (followed here by the verb PAINT as in "I finished painting the house") has the phonological structure of (56), while the reduced stress variant, for the moment labelled FINISHr, has the structure of (57). FINISHr in (57) is cliticized to the
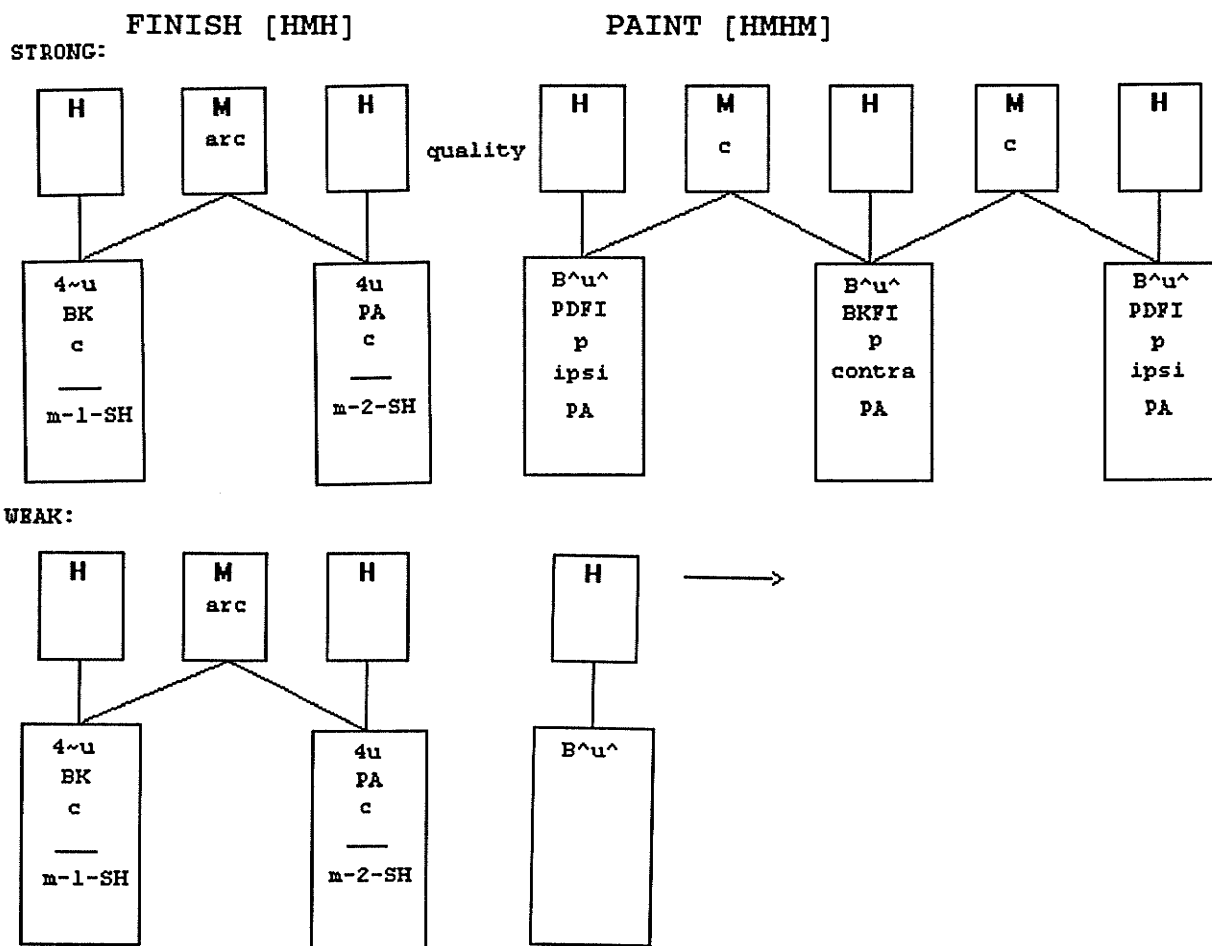
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[20]Unlike Coulter's (1990) study, which video-recorded ASL data and measured phonological features per centisecond, the features noted in the present study are purely observational.

verb SEE (FINISHr-SEE), and is analyzed in 3.4.3.2 below as a

perfective/past marker.

(56)   PRO.1 FINISH PAINT HOUSE

       I finished painting the house.

FINISH [HMH]   PAINT [HMHM]

STRONG:

```
+---+      +---+      +---+              +---+      +---+      +---+      +---+      +---+
| H |      | M |      | H |              | H |      | M |      | H |      | M |      | H |
|   |      |arc|      |   |  quality     |   |      | c |      |   |      | c |      |   |
+---+      +---+      +---+              +---+      +---+      +---+      +---+      +---+
   \        / \        /                   |        / \         |          / \        |
  +-------+   +-------+                 +-------+   +-------+   +-------+   +-------+   +-------+
  | 4~u   |   | 4u    |                 | B^u^  |   | B^u^  |   |       |   | B^u^  |   |       |
  | BK    |   | PA    |                 | PDFI  |   | BKFI  |   |       |   | PDFI  |   |       |
  | c     |   | c     |                 | p     |   | p     |   |       |   | p     |   |       |
  |       |   |       |                 | ipsi  |   | contra|   |       |   | ipsi  |   |       |
  | ----- |   | ----- |                 | PA    |   | PA    |   |       |   | PA    |   |       |
  | m-1-SH|   | m-2-SH|                 +-------+   +-------+   +-------+   +-------+   +-------+
  +-------+   +-------+
```

WEAK:

```
+---+      +---+      +---+                +---+
| H |      | M |      | H |                | H |        ----->
|   |      |arc|      |   |                |   |
+---+      +---+      +---+                +---+
   |        / \        |                     |
  +-------+   +-------+                   +-------+
  | 4~u   |   | 4u    |                   | B^u^  |
  | BK    |   | PA    |                   |       |
  | c     |   | c     |                   |       |
  |       |   |       |                   |       |
  | ----- |   | ----- |                   |       |
  | m-1-SH|   | m-2-SH|                   +-------+
  +-------+   +-------+
```

Key:
FINISH: [4~u] all fingers straight and spread, lax, thumb
opposed (out to the side), [4u] no lax feature, [BK, c, m-1-
SH] back of hand in contact with a location in space medial,
in line with the breast, shoulder height, [PA, c, m-2-SH] palm
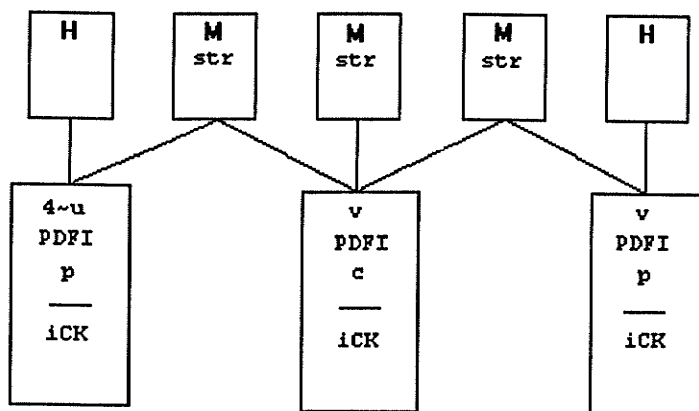in contact with a location medial, in line with the shoulder,
at shoulder height.
PAINT: quality [c] strong hand brushes location (weak hand)
during movement, [B^u^, PDFI, p, ipsi, PA] all fingers
straight but unspread, thumb flat out to the side, pads of
fingers at proximal distance ipsilateral (near the fingertips)
to the weak hand palm, [B^u^, BKFI, p, contra, PA] same
handshape, backs of fingers proximal and contralateral (near
(continued next page)

-76-

the wrist) to the weak hand palm. Weak hand: remains stable
throughout.

(57) PRO.1 FINISHr-SEE B-I-L-L

    I saw Bill.

    FINISHr-SEE [HMMMH]

```
 ┌───┐   ┌───┐   ┌───┐   ┌───┐   ┌───┐
 │ H │   │ M │   │ M │   │ M │   │ H │
 │   │   │str│   │str│   │str│   │   │
 └─┬─┘   └─┬─┘   └─┬─┘   └─┬─┘   └─┬─┘
   │       │  ╲   ╱  │  ╲   ╱  │   │
 ┌─┴────┐  └───┴──┴───┐  └───┴──┴───┐
 │ 4~u  │  │    v     │  │    v     │
 │ PDFI │  │  PDFI    │  │  PDFI    │
 │  p   │  │   c      │  │   p      │
 │ ───  │  │  ───     │  │  ───     │
 │ iCK  │  │  iCK     │  │  iCK     │
 └──────┘  └──────────┘  └──────────┘
```

Key: [4~u, PDFI, p, iCK] FINISH initial handshape, fingerpads
proximal to ipsi. cheek, [v, PDFI, c, iCK] "vee" handshape,
fingerpads contacting ipsi. cheek.

    Once again, evidence from other auxiliaries in ASL has
not as of yet been demonstrated, but a similar situation may
be inferred from Aarons, Bahan, Kegl and Neidle's (1995)
description of FUTURE (see Figure 3.4), which Aarons et al.
suggest alternates between an adverb FUTURE-ADV (their
notation) with a variable path length, that is, the final Hold
segment can range from a proximal to an extended distance from
the cheek, and a future tense marker FUTURE-TNS with a fixed
path length.   The adverb FUTURE-ADV cannot undergo
phonological reduction, because doing so would reduce its path

-77-

length and alter the intended semantic content. For example,

if "in the very distant future" is intended, the final Hold

would be at an extended distance away from the cheek, but if

this sign is reduced (i.e., the movement path is shortened and

the final Hold is closer to the cheek) the resulting meaning

cannot possibly be the same. If the so-called future tense
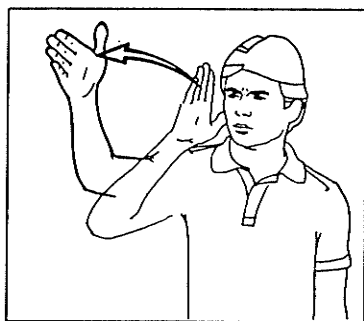
FUTURE

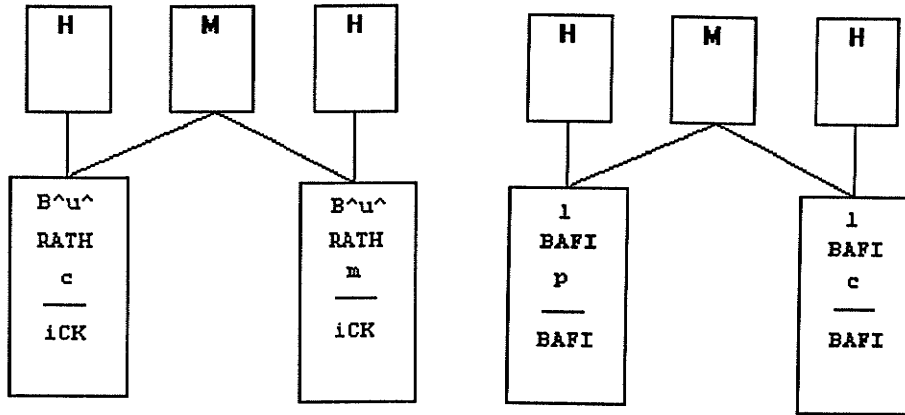Figure 3.4: FUTURE (often glossed as WILL) (Humphries, Padden
and O'Rourke 1980).

marker FUTURE-TNS undergoes reduction in the phrase FUTURE-

TNS-MEET[21] 'will meet', such reduction does not effect a change

in meaning.   The non-reduced and non-adverbial sense of

FUTURE$_{(tns)}$ and the reduced form are shown in (58) and (59)

respectively.   Thus   this   variant   of   FUTURE   and   the

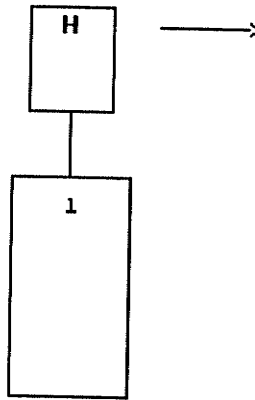auxiliarized FINISH undergo parallel phonological reduction.

---

[21]The single dash Aarons et al. place between FUTURE and
TNS (FUTURE-TNS) should not be taken to signal a morpheme
boundry as exists between FUTURE-TNS and MEET. Perhaps a more
appropriate notation would be FUTURE$_{(tns)}$-MEET. This notation
will be used in place of Aarons et al.'s from here on.
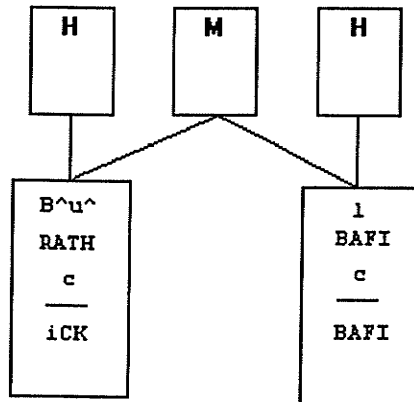
(58) FUTURE_(tns) MEET [HMH HMH]

STRONG:

```
  ┌───┐   ┌───┐   ┌───┐        ┌───┐   ┌───┐   ┌───┐
  │ H │   │ M │   │ H │        │ H │   │ M │   │ H │
  └─┬─┘   └─┬─┘   └─┬─┘        └─┬─┘   └─┬─┘   └─┬─┘
    │      ╱ ╲      │            │      ╱ ╲      │
  ┌─┴──────╱───╲────┴─┐       ┌──┴─────╱───╲─────┴─┐
  │ B^u^           B^u^│      │   1              1  │
  │ RATH           RATH│      │ BAFI           BAFI │
  │  c              m  │      │  p               c  │
  │ ───            ─── │      │ ───             ─── │
  │ iCK            iCK │      │ BAFI           BAFI │
  └───────┘   └───────┘       └───────┘   └─────────┘
```

WEAK:

```
                        ┌───┐    ────────→
                        │ H │
                        └─┬─┘
                          │
                        ┌─┴─┐
                        │ 1 │
                        │   │
                        └───┘
```

Key:
FUTURE_(tns): [B^u^, RATH, c, iCK] flat handshape, fingers unspread, radial side of thumb contacting ipsi. cheek, [B^u^, RATH, m, iCK] medial distance from cheek]
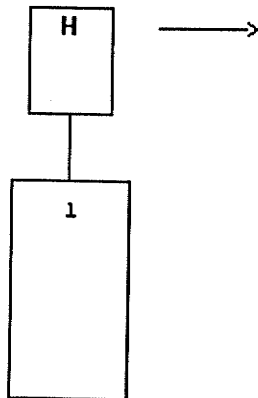MEET: [1, BAFI, p, BAFI] all fingers closed except index, back of closed fingers proximal to back of closed fingers on weak hand (hands face each other), [1, BAFI, c, BAFI] contact with weak hand.

(59) FUTURE$_{(tns)}$-MEET [HMH]

STRONG:

H	M	H

```
    B^u^          1
    RATH         BAFI
     c            c
    ───          ───
    iCK          BAFI
```

WEAK:

| H | ──────>

| 1 |

Key: weak hand [1] handshape remains throughout.

Heine (1993) notes that such grammaticalized auxiliaries frequently have a phonologically reduced form that is not able to carry distinctive stress. The full verb FINISH can carry emphatic stress as in "I most certainly am finished painting the house", but cannot be phonologically reduced, while FINISH as an auxiliary may have the reduced form. This, then, provides an additional test for auxiliarization. If FINISH in a given sentence appears in a reduced or cliticized form, it cannot be a full verb, but must be thought of as having

undergone considerable grammaticalization as an auxiliary.

3.4.1.3 Syntactic Applications of Stress/Reduction

Two additional features of ASL morphosyntax that support
the above test of stress/reduction as it applies to the
grammaticalization of FINISH are the interaction with the
negation morpheme NOT, and the separation of elements into
topic and comment constituents.

Two common means of negation in ASL are by a negative
head nod notated as "_____neg" as in (60), and the lexical
marker NOT as in (61), and shown in Figure 3.3. The nonmanual
negative head nod usually accompanies NOT as well, and spreads
to the verb.

```
            neg
(60)  PRO.1 GO
```

I'm not going.

```
            neg
(61)  PRO.1 NOT GO
```

I'm not going.

Cokely and Baker (1980) state that NOT falls immediately
to the left of the verb as (61) demonstrates, although it can
be copied in clause-final position for emphasis. NOT negates
FINISH in the same way when FINISH is a full verb with an NP
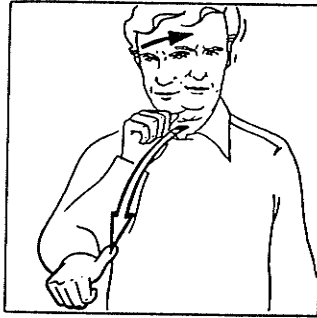
NOT

Figure 3.5: Lexical negation marker NOT (Cokely and Baker 1980)

or clausal complement, as in (62).

$$\overline{\text{neg}}$$
(62) PRO.1 NOT FINISH PAINT HOUSE

I am not finished painting the house.

In (63) we see that FINISH can appear before a verb like MEET, but (64) shows that attempting to negate FINISH here in the same manner as (62) results in an ungrammatical sentence.

(63) PRO.1 FINISH MEET REG YESTERDAY

I met Reg yesterday.

$$\overline{\text{neg}}$$
(64) *PRO.1 NOT FINISH MEET REG YESTERDAY

I did not finish meeting Reg yesterday.

I propose that (64) is not grammatical because FINISH in (63) has an auxiliary function with perfective or past meaning instead of acting as a main verb, and NOT, it appears, cannot combine with FINISH as an auxiliary. In these examples, MEET is a verb describing an event taking place in a momentary

time-frame, and cannot be described as an activity, and so to "finish meeting someone" does not make much sense. Yet as (63) shows, in ASL FINISH does occur with MEET. With PAINT, an activity verb, where to "finish painting something" seems natural, FINISH as we have seen can occur as a main verb. But as (65) shows, where FINISH is phonologically reduced (as FINISHr), the combination NOT-FINISHr cannot occur.

<u>   neg</u>
(65) *PRO.1 NOT-FINISHr PAINT HOUSE

    I did not paint the house.

This suggests, although more work is needed in this area, that one reduced sign cannot cliticize onto another equally reduced sign. More importantly for this discussion, in comparing (65) with (62) above, it is clear that FINISH has two different functions in this preverbal position[22], and their interaction with the negator NOT assists in distinguishing them.

Secondly, FINISH as a full verb and as an auxiliary can be differentiated by their position in topic and comment constituents relative to the verb they are associated with, either the verb in its complement if FINISH is a main verb, or the verb it modifies if it is an auxiliary. Another way of looking at this is that if FINISH carries normal stress, the

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[22]Interaction with NOT is different with FUTURE. Aarons et al. (1995) suggest that a lexical temporal adverbial like FUTURE-ADV cannot contract with NOT, but the auxiliarized FUTURE$_{(tns)}$ can, although with the word order FUTURE$_{(tns)}$-NOT. The similarity is that the first element of both NOT-FINISH and FUTURE$_{(tns)}$-NOT that is reduced while the second element is normally stressed.

likelihood of it appearing as part of the topic without the verb it is associated with, or that the complement verb appears in the topic constituent without FINISH, is greater. If FINISH is phonologically reduced, however, it will not appear in either the topic or comment constituent while the verb it is auxiliary to appears in the other.

A wide range of items can be topics, but one characteristic of topics according to Li and Thompson (1976) is their high degree of independence from the comment. Li and Thompson's most explicit example of this is that an NP in topic position need not be an argument of the verb at all. It is generally accepted that some kind of dependency relationship exists between verbs and their auxiliaries[23], however, and especially if the auxiliary is a bound particle, the constituency of [auxiliary + verb] is clear. When the topic is considered to have an independent status syntactically, separation of the auxiliary from its co-constituent verb into topic position or of the verb into the topic without its auxiliary is unlikely. Mandarin provides a good example for comparison[24]. In (66) the perfective aspect marker -le and the verb it is auxiliary to, *zhu* 'live', are

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[23]Heine (1993) outlines arguments that suggest on one hand, the verb is the head of the phrase with the auxiliary dependent on it, and on the other hand, the auxiliary is the head with verb dependent on the auxiliary. Nonetheless, the existence of dependency between the verb and its auxiliary is not disputed.

[24]I am indepted to Fu Mengsong for providing this example.

found together in the topic constituent. It is impossible to separate one from the other by positioning only one in the topic.

(66) (Wǒ) zài nàli zhù-le ma, yǒu liǎng ge yuè le

    I be.at there live-PERF TOP, exist two CL month PRT

    As for having lived there, it has been two months/I have
    lived there for two months.

While the inseparability of V-*le* in Mandarin into topic and comment constituents seems obvious, the same cannot be said for FINISH in ASL, and this is the question under discussion here. As the following examples show, when FINISH appears in its stressed form and has a clausal complement, it is separable from its complement verb, but when it is phonologically reduced, it is not.

<pre>
                         t
(67)   PRO.1 PAINT HOUSE FINISH
</pre>

    As for my painting the house, I am finished/I finished
    painting the house.

<pre>
                         t
(68) PRO.1 FINISH WHAT PAINT HOUSE
</pre>

    As for what I finished, it was painting the house/I
    finished painting the house.

<pre>
             t
(69)   LAST-WEEK PRO.1 FINISHr SEE B-I-L-L
</pre>

As for last week, I saw Bill/ I saw Bill last week.

<pre>
                       t
(70)   *PRO.1 FINISHr WHAT SEE B-I-L-L LAST-WEEK
</pre>

    As for a "past event", I saw Bill last week.

Examples (67) and (68) show FINISH in the topic and comment respectively, while its complement verb is in the other

constituent. In (69) the reduced form of FINISH appears together with SEE in the comment, but as the ungrammaticality of (70) shows, FINISHr cannot be positioned in the topic separated from SEE in the comment. An explanation could be that FINISHr, as an unstressed syllable, is cliticized to the verb, thus restricting its ability to appear in a separate constituent, and lending further evidence that it in fact has undergone auxiliarization. It could be said, then, that topicalization is one way of distinguishing between elements that are more verb-like and those in the later stages of auxiliarization. Full verbs or their complements can be marked separately from one another as topics, whereas elements that are auxiliary cannot be independently marked as topics.

Interestingly, Li, Thompson and Thompson (1982) suggest that the perfective marker -le in Mandarin has been grammaticalized from the verb liao meaning 'to finish'. It would be intriguing to investigate whether or not liao can occur in topic and comment constituents separate from its complement verbs in a way similar to ASL.

In summary, the application of the pronominal insertion test and the stress/reduction test, along with consideration of the interaction of FINISH with negation and topic-comment structure, provides further evidence of the grammaticalization of FINISH, and assists in distinguishing among its various forms and functions.

3.4.2 *FINISH as a Main Verb*

In this section I describe the function of FINISH as a main verb. Along with this I will show that when described phonologically with the Movement-Hold Model, it is evident that FINISH has two distinct structures, a Hold-Move-Hold [HMH] structure, and a Hold [H] with an internal, or local, movement. I will show that, although rare, FINISH as [HMH] occurs as a full verb with an NP complement. More frequently, both [MHM] and [H] structures occur as full verbs with clausal complements.

Diachronic evidence is not available showing clear grammaticalization of verb to TAM (tense/aspect/modality) pathways in ASL. Nonetheless, the data presented in this section and those to follow can be interpreted as indicative of grammaticalization, in that they exemplify many key grammaticalization processes outlined in, for example, Heine and Reh (1984), Hopper (1991), Heine (1993) and Bybee, Perkins and Pagliuca (1994). Craig (1991) suggests that grammaticalization can be studied from a synchronic perspective because polysemic forms can be interpreted as evidence of links along grammaticalization chains. When diachronic evidence of grammaticalization is not available in a given language, well-studied generalizations about this process made cross-linguistically are sufficient to warrant their application in explaining certain phenomena (Hopper 1991).

There is at least one early reference to FINISH, found in Long (1918), one of the first ASL dictionaries to be in circulation. Long says of FINISH:

> The colloquial and by far the most common method of rendering the sign for "finished" is to hold the right open or "5" hand out in front from the side and give it a flip toward the right, with a twist of the wrist so the palm is turned down. (p. 26)

Unfortunately, Long does not include many notes on syntax[25]. Of interest, though, is Long's description of the colloquial FINISH as employing only one hand. Frishberg (1975) describes a historical phonological process whereby many signs made below the neck historically that were single-handed signs have become two-handed. Given Long's description, FINISH appears to fit this pattern. As well, Long's description of FINISH is most similar to the modern-day [HMH] form of the verb.

Instances in discourse where FINISH occurs as a lexical

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[25]Long's description of the colloquial sign for FINISH is included as a note below his dictionary entry for "Have, Finished", obviously thought of as a more formal or proper sign, articulated as the modern ASL sign for END:
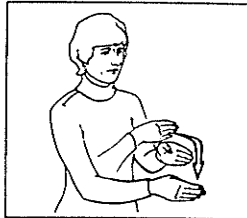
END (Humphries, Padden and O'Rourke 1980)

Long indicates this to be the "auxiliary of the complete tenses" (p. 26) and suggests it is postverbal. Rather than assume that this syntactic position and meaning are the only possible ones in 1918, it seems plausible that others are not described, given the array of uses found today. If anything, this suggests that the process of grammaticalization of FINISH had begun some time before 1918.

verb in a matrix clause with an NP complement are relatively few. It is, however, attested, as can be seen in (71) and (72).

(71) YESTERDAY PRO.1 FINISH HOMEWORK(noun)

I finished my homework yesterday.

(72) (Context: The signer had been discussing painting his house, garage and fence.)

PRO.1 FINISH HOUSE

I finished the house.

In (71) and (72) HOMEWORK and HOUSE are NP complements of FINISH as a main verb. HOMEWORK in (71) is in its noun form, a compound sign in which the handshape for HOME touches the side of the cheek briefly and moves directly to the handshape and [MHMH] pattern of WORK[26].
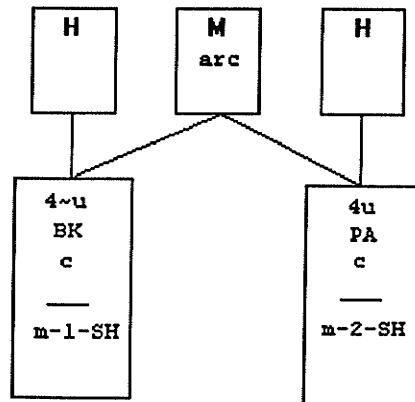
FINISH in (71) and (72) has the phonological structure shown in (73). Only those features relevant to the current discussion are included. For example, in most instances of FINISH described in this chapter, the strong and weak hands have identical, although mirror image, features. The weak hand, therefore, is not always specified here. In addition, this full verb includes as part of its meaning that the activity described has been brought to unquestionable completion or has reached a state of finality, with the implication that the activity will not be resumed in the foreseeable future. From here on, this morpheme will have the

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[26]The verb form of HOMEWORK and its significance is illustrated in (104).

label FINISH.MAIN$_{(complete)}$, signifying that it occurs as the main verb of a clause and carries the above mentioned notion of completion.
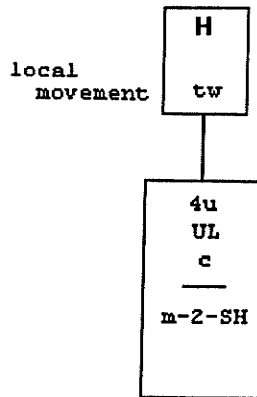
(73) FINISH.MAIN$_{(complete)}$

```
      ┌───┐   ┌───┐   ┌───┐
      │ H │   │ M │   │ H │
      │   │   │arc│   │   │
      └─┬─┘   └─┬─┘   └─┬─┘
        │      ╱ ╲      │
        │     ╱   ╲     │
      ┌─┴────┐   ┌──┴───┐
      │ 4~u  │   │ 4u   │
      │ BK   │   │ PA   │
      │ c    │   │ c    │
      │      │   │      │
      │ ───  │   │ ───  │
      │m-1-SH│   │m-2-SH│
      └──────┘   └──────┘
```

Key: [4~u, BK, c, m-1-SH] flat handshape, fingers spread, thumb out, lax feature, with back of hand contacting location in signer's space, a medial distance from the signer, in line with the breast, and at shoulder height. The weak hand is a mirror image, and therefore not specified.

The second form of FINISH as a main verb has the [H] structure shown in (74). It is labelled from this point on as FINISH.MAIN and it differs semantically from (73) in that, while still meaning that the event or action has come to an end, the same sense of unquestionable finality is notably absent. The completeness of the event or activity may, given an appropriate context, be considered temporary.

(74) FINISH.MAIN [H]

```
                    ┌──────────┐
                    │    H     │
       local        │          │
          movement  │    tw    │
                    └────┬─────┘
                         │
                    ┌────┴─────┐
                    │    4u    │
                    │    UL    │
                    │    c     │
                    │   ───    │
                    │  m-2-SH  │
                    │          │
                    │          │
                    └──────────┘
```

Key: [4u, UL, c, m-2-SH] no lax feature, ulnar side of hand contacting the location in space at a medial distance from the signer, in line with the shoulder and at shoulder height.

In comparing the structures of (73) and (74), we see that the most critical difference is the number of segments, FINISH.MAIN(complete) in (73) having three [H, M, H] and FINISH.MAIN in (74) having only one [H]. The initial and final Holds of FINISH.MAIN(complete) differ slightly, but none the less identifiably, in their location (m-1-HS to m-2-SH), the handpart alters from the back (BK) of the hand to the palm (PA) at the point of contact, and the initial [H] has a lax feature indicated by the tilde [~] in the description of the handshape (4~u) while the final [H] has no [~] feature. The single [H] of FINISH.MAIN has no lax feature, and the handpart is indicated as ulnar (UL) which means that the palm orientation is different than either the initial or final [H] of FINISH.MAIN(complete). A second major difference between (73) and (74) is that for FINISH.MAIN(complete) movement is described as a [M] segment with an [arc] contour, while FINISH.MAIN has

-91-

no [M] segment at all. Instead the movement is a local (repeated) twist [tw], which means that the sign does not shift from one location to any other (thus the single [H]), and the movement is contained within the [H]. Two such different internal structures along with the difference in meaning between FINISH.MAIN(complete) and FINISH.MAIN suggests that these two signs should be understood as related, but distinct morphemes. The examples in (75) to (77) illustrate this semantic difference clearly. As described above, the verb FINISH.MAIN(complete) in these examples has the structure [HMH], while FINISH.MAIN has [H] as its structure.

(75) a. (The signer has been painting his house for some time, and couldn't wait for it to be done)

   YESTERDAY PRO.1 FINISH.MAIN(complete) PAINT HOUSE

   I finally finished painting the house yesterday.

   b. (The signer has been enjoying painting his house, and states the following just as a matter of fact)

   YESTERDAY PRO.1 FINISH.MAIN PAINT HOUSE

   I finished painting the house yesterday.

(76) a. (Signed after a rather huge meal)

   PRO.1 FINISH.MAIN(complete) EAT

   I am finished eating everything I possibly could (I couldn't eat another thing).

   b. (The signer has been eating a sandwich)

   PRO.1 FINISH.MAIN EAT

   I finished eating (the sandwich).

(77) a. PRO.1 FINISH.MAIN(complete) WORK TIME.SIX

   I finished working at six (for good).

b. PRO.1 FINISH.MAIN WORK TIME.SIX

I finished working at six (until my next shift).

The [HMH] forms in (75a) to (77a) all carry the sense that the activity is unquestionably completed and won't be taken up again in the foreseeable future. In (b) in each of the above, the activity has ended, but the same notion of absolute finality is not conveyed, especially in (77b), where a sense of temporariness is implied.

A question arising at this point is whether one of these forms, either FINISH.MAIN$_{(complete)}$ or FINISH.MAIN, is more basic, and if so, which one. In Heine's (1993) Stages of grammaticalization, some of the first processes to take place are that in "Stage A" prior to any grammaticalization, a verb has full lexical meaning, and its complement typically refers to a concrete object. But in "Stage B", the complement tends to refer to a "dynamic situation" (1993:59) expressed by a nominal such as a gerund rather than an object. The exact status of PAINT, EAT and WORK in (75) to (77) is uncertain, but it is clear they are verb-like, suggesting that these complements might fit into Heine's description of "Stage B".
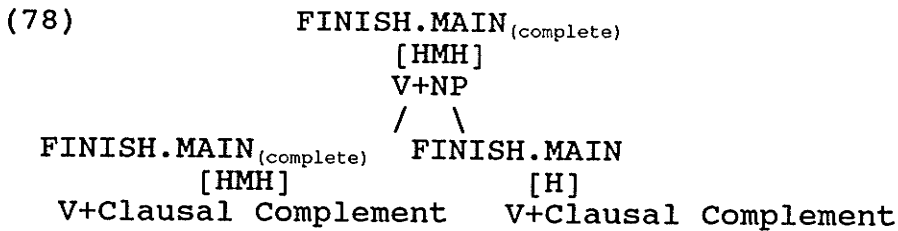
Heine and Reh (1984) and Heine (1993) describe, across early stages of grammaticalization, the "desemanticization" or the loss of some semantic content of the lexical verb. Along a similar vein, Bybee, Perkins and Pagliuca (1994) discuss the change in meaning as generalization, that is, the term can be used in broader contexts.

If the ASL verb FINISH described above is considered to have begun the process of grammaticalization, then I propose that the most basic form from which subsequent morphemes are derived is FINISH.MAIN$_{(complete)}$ [HMH]. First, from the data collected in this study, FINISH.MAIN$_{(complete)}$ occurs with an NP complement, as with the objects HOMEWORK and HOUSE in (71) and (72) above, indicative of Heine's (1993) "Stage A", while FINISH.MAIN, according to my consultants, could not. FINISH.MAIN$_{(complete)}$ and FINISH.MAIN both occur with clausal complements, however. Second, the semantic content of FINISH.MAIN could be seen as bleaching from that of FINISH.MAIN$_{(complete)}$ by not involving the notion of unquestionable finality, but just that the activity had been concluded. Third, it is the [HMH] form of FINISH that is described in Long's 1918 dictionary rather than [H], although care should be taken not to read too much into this fact, since there is no guarantee that the dictionary was comprehensive[27]. And finally, preverbal FINISH.MAIN [H] appears to be one link in a longer grammaticalization chain toward auxiliarization, while FINISH.MAIN$_{(complete)}$ does not grammaticalize further. The beginning of this

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[27]ASL dictionaries do not always give variants of signs, and in fact are often based on English vocabulary. Sternberg (1981) is a good example of this. Interestingly, the same two signs for FINISH are listed by Sternberg as by Long (1918) although Sternberg's version of the "colloquial" sign is two-handed, with the finger-tips pointed upward, similar to FINISH [HMH] in this study. FINISH [H] is not mentioned in Sternberg.

grammaticalization pathway is thus illustrated in (78).

(78)   FINISH.MAIN (complete)
                              [HMH]
                              V+NP
                             /   \
      FINISH.MAIN (complete)   FINISH.MAIN
             [HMH]   [H]
       V+Clausal Complement   V+Clausal Complement

A further, and somewhat obvious, question is whether or not the structure of FINISH.MAIN as [H] is a reduced form of the syllable [HMH] of FINISH.MAIN (complete). Liddell and Johnson (1989) do not suggest as a general rule that [HMH] syllables reduce to [H] syllable, and neither do they suggest that [H] is any more basic a structure than [HMH]. This question is not addressed in this study, but nonetheless it would be interesting to look further at these and at other similar pairs of signs in ASL, if they indeed exist, to see if any generalizations hold regarding the relation between these syllable structures.

3.4.3 Continuing Along the First Grammaticalization Pathway: From FINISH.MAIN to PAST Marker

Grammaticalization, as outlined in Chapter 1, is a process in which forms that begin as lexical items become forms that are less lexical and more grammatical in function (Bybee, Perkins and Pagliuca 1994). It is a gradual diachronic process that is unidirectional with few exceptions (Heine, Claudi and Hünnemeyer 1991), but one that can be examined, nonetheless, synchronically.

Further, earlier forms that are more lexical, or at least

-95-

less grammatical, do not necessarily disappear once a new, more grammatical, form emerges (e.g. Craig 1991, Heine, Claudi and Hünnemeyer 1991, Hopper 1991, Bybee, Perkins and Pagliuca 1994). Rather, several forms may co-exist, forming what Craig and others call a "grammaticalization chain". Typically, grammaticalization is gradual and continuous (Heine, Claudi and Hünnemeyer 1991), without resulting in discrete grammatical categories, and as such, the meanings of forms along the grammaticalization chain overlap. In this section I examine a grammaticalization chain or pathway in ASL in which FINISH.MAIN, with [H] structure, undergoes auxiliarization.

An item somewhere along such a grammaticalization chain frequently exhibits properties from more than one conceptual or grammatical category. This is exemplified by *megbé* in (79) from Ewe (Kwa family, Niger-Congo), which may be interpreted in an identical phrasal context as either spatial or temporal (Heine, Claudi and Hünnemeyer 1991:162).

(79) é   le megbé ná-m

     3sg be behind PREP-1sg

     a. He is behind me (spatially).
     b. He is late (=he could not keep pace with me).

Megbé in Ewe originally referred to the body part 'back'. Heine et al. (1991) give evidence that the grammaticalization chain *megbé* has undergone is that of object (the body part) to space (in back of) to time (to come after) to quality (to be backward). These categories are not mutually exclusive, but

overlap, and thus sentences such as (79) are semantically ambiguous, and can be read as falling into either category of space and time.

In ASL, FINISH can be seen to occupy a number of sentential positions, perform various functions, and carry a host of meanings, some of which are more obviously polysemic than others. That FINISH should be considered a likely candidate for grammaticalization comes as no surprise, since Heine, Claudi and Hünnemeyer list "finish" as one of the most basic cognitive source concepts that undergo this process[28]. Bybee, Perkins and Pagliuca (1994) also list "finish" or "be finished" as a common lexical source of morphemes with anterior, perfective or past senses.

As for the type of verb "finish" is, Givón categorizes it as a modality verb, the semantic definition of which he describes as having the following two characteristics:

> a. The main verb codes inception, termination, persistence, success, failure, attempt, intent, obligation or ability--vis-a-vis the complement state/event.
> b. The subject of the main clause is obligatorily also subject of the complement clause. (1990:533)

Givón (1990:540) lists the modality verb *maku* "finish" in Ute (Uto-Aztecan) as an example, given here as (80).

(80) mamaci wúuka-maku-puga

woman-SUBJ work-finish-REM

The woman finished working.

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[28]Others are "do/make", "take/hold", "say", or movements like "go", "come", "leave" and "arrive" (p. 153).

3.4.3.1 The Notion of Auxiliary

Before describing the grammaticalization chain of FINISH.MAIN to PAST marker, the notion of auxiliary in general, and in ASL specifically, is worthy of discussion. Reference to auxiliaries in ASL literature is limited, with some authors claiming that auxiliary verbs in ASL do not exist (Isenhath 1990, Smith 1990) and others claiming that they do (Fischer and Gough 1972, Fischer 1974, 1978). Fischer (1974) describes ASL as having completely free word order, with the auxiliary appearing in any position in the sentence, as do the other basic elements of subject, object and verb[29]. Fischer provides only minimal criteria for categorizing elements as auxiliaries, that of a native signer's intuition, and that "the potential auxiliary could occur at the beginning and/or end of a sentence with no change in meaning from an occurrence in the middle of a sentence (1974:198)". Native signers' intuition aside, Fischer's description of the sentence position of auxiliaries is inadequate in that it does not differ from that of any other sentence component, especially given her claim of free word order. Fischer's list of auxiliaries includes FINISH, BETTER, CAN, CAN'T, WILL, MUST, HAVE-BEEN as a past continuous, FROM-NOW-ON as future continuous, NOT-YET, HAPPEN, SUCCEED, and potentially SEEM. She also states that a number of these function as main verbs,

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[29]It is clear, however, that ASL has SVO as its basic word order, as explicated in Fischer 1975, and even more convincingly in Liddell 1980.

including FINISH. The present study, in focussing on FINISH, adds evidence to the premise that ASL is in fact not an entirely free word order language, and that the meaning of a clause is affected by, among other things, the position of the auxiliary FINISH.

Smith (1990), on the other hand, suggests that no evidence of auxiliaries has been found in any sign language, including ASL. One can assume he means prior to his study of Taiwan Sign Language (TSL), although this also contradicts descriptions, however rudimentary or accurate, such as Fischer's above. Smith claims the existence of three auxiliaries in TSL, all with verb-like properties (subject and object agreement, mainly) and two having forms identical to the TSL lexical verbs SEE and MEET. All three auxiliaries must occur with a lexical verb, and can be positioned either at the beginning of a sentence or, more commonly, just before the main verb. All three take subject and object agreement, and when co-occurring with a normally agreeing verb, the main verb appears in its uninflected form.

Givón (1984) states that auxiliary verbs, while often retaining some formal properties of lexical verbs, are verbs in the process of grammaticalizing into tense, aspect and mood (TAM) markers. As an example, Lhasa, a Tibeto-Burman language, has tense, aspect and evidentiality forms that relate either "synchronically or etymologically" (Delancey 1991:5) to lexical verbs. One such form is *tshar*, which

occurs as a lexical verb meaning 'to finish', but also as an anterior marker in its grammaticalized form as a member of a serial construction, as in (81).

(81)   kho phyin tshar -ba red (Delancey 1991:10)

    he   went   finish PERF

    He has gone.

-ba red is an additional perfective marker that attaches to the final element in the serial verb complex to signal the end of the serialized string.

Delancey describes three stages of grammaticalization, as illustrated by the serial verb construction in Lhasa. First, serialization takes place, in which regular subordination markers, signifying that the verb is non-final, are dropped from the first verb in the chain. Second, Delancey proposes a stage of auxiliarization, in which the grammaticalized verb loses phonological and morphological independence. And last, the grammaticalized verb undergoes morphologicalization, whereby it becomes an inflection on, rather than occurring alongside, another verb. Of significance is that tshar occurs in three different forms, as the main verb meaning 'to finish', as a serialized verb signaling anterior, and as an anterior suffix, which has undergone phonological reduction, thus clearly showing category overlap.

The question of whether or not a universal category of auxiliary exists is not one that has been resolved. Heine (1993) presents arguments both for and against such a

universal category, suggesting that acknowledgement of such a category depends more on one's theoretical perspective than upon empirical grounds. Steele (1978) believes that a universal category of auxiliary does exist, but finds that some members of the category share verb-like properties, therefore rightly being referred to as auxiliary verbs, while others tend to be members of a set of TAM elements, and must be referred to simply as auxiliaries.

Steele lists several universal auxiliary characteristics whether or not the auxiliary is verb-like. These are:

i) that no clause boundaries exist between an auxiliary
and a lexical verb;

ii) that the category of auxiliary contain a set of TAM
markers, and;

iii) that the auxiliary has some degree of independence
from the lexical verb.

Not considered universal are the notions of the auxiliary being adjacent to the lexical verb, or that the auxiliary must be verb-like.

Finally, it should be noted that a category such as auxiliary may have members that share many characteristics of the prototypical auxiliary, while others share fewer, which indicates that the degree of grammaticalization along the verb to TAM chain will vary for any given auxiliary (Hopper and Traugott 1993). This notion helps explain the differences between the verb-like and non-verb-like auxiliaries considered

by Steele, placing them on a continuum rather than attempting to classify several subcategories according to shared characteristics.

3.4.3.2 Auxiliaries in ASL: Anterior, Perfective and Past Marking

It is not the case that every instance of FINISH.MAIN$_{(complete)}$ or FINISH.MAIN followed by a clausal complement is so easily identifiable as a main verb. In fact, it is quite the contrary. In this section, auxiliaries marking anterior, perfective and past are discussed as points along a grammaticalization chain. While they are all in use concurrently in ASL (somewhat analogous to Lhasa *tshar*) to a greater or lesser extent along with FINISH.MAIN$_{(complete)}$ and FINISH.MAIN, they can be interpreted as developing from FINISH.MAIN because they typify the grammaticalization schema outlined, for example, in Heine (1993). Heine describes four processes or "shifts" that take place as items grammaticalize, all of which occur in the auxiliarization of FINISH.MAIN. These are 1) desemanticization, a semantic shift whereby the item in question loses its lexical semantic content and takes on a grammatical function; 2) decategorialization, a morphosyntactic shift, in which a verb, for example, loses its verbal properties (such as the ability to passivize, be nominalized or form imperatives), and where its complement takes on properties of a main verb; 3) cliticization, a morphophonological shift during which the verb gradually loses status as an independent word, cliticizing on to the newly

formed main verb[30]; and 4) erosion, a phonetic shift, where the phonological material of the verb erodes and the resulting functional morpheme loses its ability to carry distinctive tone or stress.

A common grammaticalization chain described by Heine (1993) and others is that developing out of verbs such as "finish" into the following markers:

completive/resultative > perfect[31] > perfective > past

The entire grammaticalization schema stemming from FINISH in ASL is complex, with certain preverbal functional morphemes developing from the transitive verb FINISH with [H] structure, and others in a postverbal position from the stative predicate BE.FINISHED (either [H] or [HMH]) discussed as an additional pathway in section 3.4.4 below[32].

a) Anterior

The anterior signals a past action but with relevance to the time of reference (Bybee, Perkins and Pagliuca 1994). Bybee et al. suggest that anteriors frequently grammaticalize from completives, meaning that something has been done thoroughly or to completion, which have themselves often

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[30]Heine (1993) notes that in many West African languages the verb cliticizes to the subject pronoun instead of the complement verb.

[31]Or, anterior.

[32]Some functions, such as anterior, have developed in both syntactic positions, but the postverbal appears to be much preferred by ASL signers.

-103-

grammaticalized from verbs meaning "to finish". In this study, a morpheme defined as completive aspect appears in the grammaticalization chain in clause-final position described in 3.4.4.1. Whether or not a clearly identifiable preverbal completive was active in ASL at any time is not known, but in the present corpus, none was apparent. Rather, several instances of FINISH followed by another verb appear to have moved away from the strictly verbal sense, and have an anterior reading. This morpheme is given the label FINISH.AUX$_{(ant)}$ because, I argue, it is auxiliary to the verb directly following it rather than acting as a main verb itself, it has lost much of the semantic notion of completing something, and it has the sense of current relevance. Examples are given in (82) to (84).

(82) (The signer is asked if she wants something to eat)

FINISH.AUX$_{(ant)}$ EAT

I've already eaten.

(83) (The signer is asked if he will be seeing Bill today)

PRO.1 FINISH.AUX$_{(ant)}$ SEE B-I-L-L LAST.WEEK

I saw Bill last week (so I don't need to today).

(84) (The signer is discussing a business trip to Regina taken the year prior, and the question has come up whether or not the signer will be going back once more)

                                               ‾‾‾‾‾‾‾‾‾‾‾‾‾t   neg

(PRO.1) FINISH.AUX$_{(ant)}$ TOUCH REGINA, THIS YEAR AGAIN, NOT

I've been to Regina, but I'm not going back again this year.

FINISH.AUX$_{(ant)}$ in (82) to (84) has the structure [H] rather

than [HMH]. (82) has the same sentential structure as (76b), repeated below (the null argument PRO.1 notwithstanding), which indicates ambiguity between the main verb FINISH, also with the structure [H] and the anterior reading, the difference being indicated purely by the discourse context.

(76) b. PRO.1 FINISH.MAIN EAT

      I finished eating (the sandwich).

The anterior sense of (83) and (84) appears to be less ambiguous in that the notion of completion is not likely to be understood literally. SEE in (83), and TOUCH, a metaphoric extention of the verb 'to touch' here meaning 'to go to', in (84) are not activities that can be "finished", and therefore the preverbal FINISH does not act as a lexical verb.

     The ambiguity between FINISH.MAIN and FINISH.AUX$_{(ant)}$ is resolved if we attempt to negate FINISH with the clitic NOT. In (85), and as we have seen in section 3.4.1.3, NOT can freely negate the main verb FINISH.MAIN, but cannot give an anterior reading. In (86) to (87), however, the reading cannot be anterior, and in fact, no logical meaning is possible.

(85) PRO.1 NOT-FINISH.MAIN/*NOT-FINISH.AUX$_{(ant)}$ EAT

    I didn't finish eating (the sandwich; there's some left).
    *I didn't already eat (the sandwich, so I will now).

(86) *PRO.1 NOT-FINISH.AUX$_{(ant)}$ SEE B-I-L-L LAST.WEEK

    (I didn't see Bill last week (so I need to today).)

(87) *(PRO.1) NOT-FINISH.AUX$_{(ant)}$ TOUCH REGINA

(I've not been to Regina (but I might be going this
year).)

It also appears that FINISH.AUX$_{(ant)}$ can be phonologically
reduced, having the structure given in (88), although this
reduced form tends to occur more often with the perfective and
past readings described below.   This form is labelled
FINISH.AUXr$_{(ant)}$ to differentiate it from the non-reduced form.
This appears to be a phonological phonomenon without any
change in meaning.

(88) FINISH.AUXr$_{(ant)}$ [H]
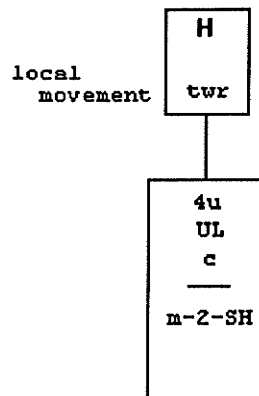
Key: [twr] reduced twisting local movement

While FINISH as a main verb can be separated in the
sentence from its complement by topicalization, FINISH.AUX$_{(ant)}$
cannot be.   In (89) and (90), this division into topic and
comment constituents is in evidence, while in (91) and (92)
it is not possible.

$$\overline{\hspace{3cm}t}$$
(89) PRO.1 FINISH.MAIN WHAT, EAT SANDWICH

What did I finish doing? Eating a sandwich/I finished
eating a sandwich.

$$\overline{\hspace{2cm}t}$$
(90) EAT SANDWICH, FINISH.MAIN

As for eating the sandwich, I finished/I finished eating
the sandwich.

$$\overline{\hspace{3.5cm}t}$$
(91) *PRO.1 FINISH.AUX$_{(ant)}$ WHAT, SEE B-I-L-L LAST.WEEK

$$\overline{\hspace{2.5cm}t}$$
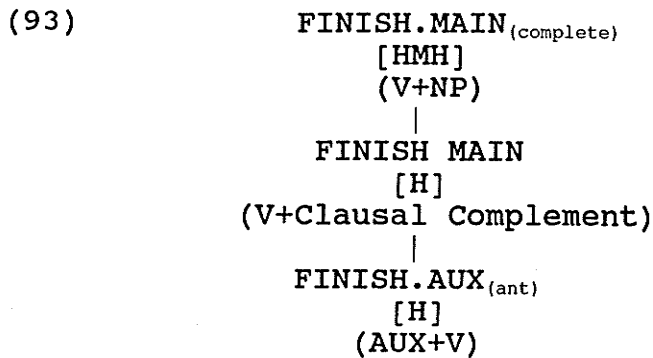(92) *SEE B-I-L-L LAST.WEEK, PRO.1 FINISH.AUXr$_{(ant)}$

In (89) FINISH.MAIN is in the topic phrase, while its
complement verb EAT is in the comment, whereas (90) shows the
reverse. An anterior reading is not possible in (91), and in
(92), with SEE in the topic, the anterior cannot be positioned
in the comment separated from the verb in the topic[33].

FINISH.AUX$_{(ant)}$ can thus be understood to have
grammaticalized from FINISH.MAIN. (93) shows this link along
the verbal FINISH to PAST marker grammaticalization pathway.

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[33]Example (92) is similar in structure to the anterior
described in 3.4.4.1 below, although the anterior in 3.4.4.1
is analyzed as grammaticalizing from a different (but related)
source, BE.FINISHED, along an altogether different pathway,
and which does not appear to have a phonologically reduced
variant.

(93)   FINISH.MAIN$_{(complete)}$
                              [HMH]
                              (V+NP)
                                |
                         FINISH MAIN
                              [H]
                    (V+Clausal Complement)
                                |
                         FINISH.AUX$_{(ant)}$
                              [H]
                            (AUX+V)

It should be noted that a second anterior in clause-final

position has developed from the stative predicate BE.FINISHED

in ASL, discussed in 3.4.4.1 below. This clause-final

anterior, according to my consultants, is by far preferred

over the one just described. Nonetheless, they both occur[34].

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[34]An additional auxiliary not analyzed in detail in this
study is what I would label FINISH.AUX$_{(inchoative)}$, and suggest
that it is an additional grammaticalization of FINISH.AUX$_{(ant)}$,
but does not fall as a further link in the grammaticalization
chain from verbal FINISH to PAST marker. This could perhaps
be illustrated as (the vertical "..." indicates the yet to be
described links along this chain):
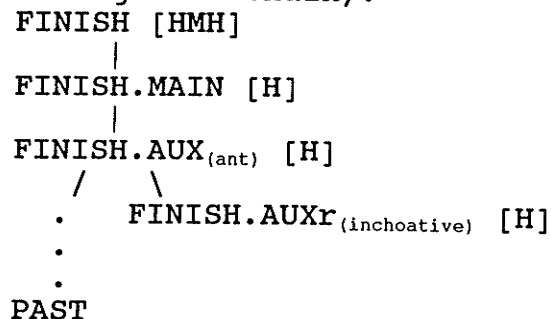
                    FINISH [HMH]
                         |
                    FINISH.MAIN [H]
                         |
                    FINISH.AUX$_{(ant)}$ [H]
                      /   \
                     .   FINISH.AUXr$_{(inchoative)}$ [H]
                     .
                     .
                    PAST
The inchoative auxiliary is exemplified by (i).

(i) PRO.3 FINISH.AUXr$_{(inchoative)}$ TALL
    He has become tall.

Bybee et al. (1994) cite Thomas (1978:164) who gives a similar
reading of an anterior in Engenni (Kwa, Niger-Congo), in (ii).

(ii) ò menimeni nì
     it sweet   anterior
     'It has become sweet.'

b) Perfective

Perfectives are defined by Bybee, Perkins and Pagliuca (1994) as events viewed as bounded, often in the past, but described for their own sake with no particular relevance to the time of speaking. In this regard they differ from anteriors. Preverbal FINISH in ASL can in many contexts be shown to have a perfective reading, as in (94) to (98). This sense is given the label FINISH.AUXr$_{(perf)}$, indicating that it has an auxiliary function, is phonologically reduced, and is perfective in meaning.

(94) (The signer is saying when and why he went to Regina)

    (PRO.1) FINISH.AUXr$_{(perf)}$ TOUCH REGINA LAST.YEAR,
          __t__
    WHY, MEETING

    I went to Regina for a meeting last year.

(95) (PRO.1) FINISH.AUXr$_{(perf)}$ EAT SANDWICH

    I ate a sandwich.

(96) (PRO.1) FINISH.AUXr$_{(perf)}$ WORK THREE.HOUR YESTERDAY

    I worked for three hours yesterday.

(97) (The signer is letting someone know that he ran into Bill the week before)

    PRO.1 FINISH.AUXr$_{(perf)}$ SEE B-I-L-L LAST.WEEK

    I saw Bill last week (and he didn't look so good).

(98) (The signer is relating a series of events that previously took place)

    _____t
    PAPER, PRO.1 FINISH.AUXr$_{(perf)}$ PUT$_a$

    As for the paper, I put it down/I put the paper down (and then left).

As (94) to (98) illustrate, the event described by the verb is seen as having taken place, but in none of these examples is there reference to any internal part of the event or activity, and neither do any of the activities carry on, that is, each verb describes an event that is bounded, and the boundedness is signaled by FINISH.AUXr$_{(perf)}$. Each sentence may, given a context suggesting current relevance, have an anterior reading as well. (84) above and (94) contrast in this regard for the verb TOUCH 'to go to'. One further example also illustrates this, with the anterior reading given in (99).

(99) (PRO.1) FINISH.AUX$_{(ant)}$ EAT SANDWICH

I've eaten the sandwich (so give me some dessert).

This contrasts with the perfective FINISH.AUXr$_{(perf)}$ in (95). The difference between the anterior and perfective can be subtle, and the above examples of perfectives and anteriors show that overlap of these two meanings continues to take place in ASL. FINISH.AUX$_{(ant)}$ and FINISH.AUXr$_{(perf)}$ differ in that first, desemanticization goes a step further--the morpheme's semantic content has broadened to include any event looked at as a whole (and past) event. Second, while FINISH.AUXr$_{(perf)}$ is given in (94) to (98) as a reduced form, it is possible to get the same perfective reading with a non-reduced form. The anterior reading of FINISH.AUX$_{(ant)}$ may appear as a reduced form, but the likelihood is that for the anterior, FINISH.AUX will not be reduced, whereas for the perfective, it will be.

-110-

Sentences (100) to (101) show simply that FINISH.AUX$_{(perf)}$ cannot be negated with the clitic NOT, and (102) shows, similar to the anterior, that the perfective cannot be separated from its verb PUT by topicalization.

(100) *(PRO.1) NOT-FINISH.AUXr$_{(perf)}$ WORK THREE.HOUR YESTERDAY

      ___t
(101) *PAPER, PRO.1 NOT-FINISH.AUXr$_{(perf)}$ PUT$_a$

         ___t
(102) *PUT$_a$ PAPER, PRO.1 NOT-FINISH.AUXr$_{(perf)}$

The perfective, then, can be viewed as the next link along the grammaticalization chain, and is given in (103).

(103)   FINISH.MAIN$_{(complete)}$
                      [HMH]
                   (V+NP)
                    |
             FINISH MAIN
                [H]
      (V+Clausal Complement)
                |
          FINISH.AUX$_{(ant)}$
               [H]
            (AUX+V)
               |
         FINISH.AUXr$_{(perf)}$
               [H]
            (AUX+V)

c) Past

The past, as Bybee, Perkins and Pagliuca (1994) define it refers to a situation occurring before the moment of speech. The main difference between past and perfective, according to Bybee et al. is that the past relates a situation deictically to the moment of speaking, whereas the perfective does not. Rather, the perfective expresses a point of view that sees the situation as a single, bounded event.

Past and perfective may be difficult to distinguish, and this is the case for ASL, but several examples appear to indicate that the event took place prior to the moment of speaking, but with no particular reference to the event's boundedness or completeness. These examples are shown in (104) to (106), with the auxiliary labelled FINISH.AUXr$_{(past)}$-.

(104) PRO.1 FINISH.AUXr$_{(past)}$-DO.HOMEWORK

    I did homework.

$$\overline{\quad\quad\quad\quad\quad\quad\quad\quad t}$$

(105) PRO.1 FINISH.AUXr$_{(past)}$-STUDY, $\overline{\text{BE.FINISHED}_{(complete)}}$[35] NOT-YET

    I studied, but as for being finished, I am not yet/I
        studied, but did not get done.

$$\overline{\quad\quad t}$$

(106) PRO.1 FINISH.AUXr$_{(past)}$-WORK THREE-HOUR, $\overline{\text{WORK}}$ NOT-FINISH

    I worked for three hours, but as for the work, I didn't
        finish it/I worked for three hours, but did not get
        finished.

Each of these sentences contains an activity verb with no inherent end-point. The auxiliary places the activity prior to the time of speaking, and is thus the most general sense for this form of FINISH so far. Interestingly, FINISH.AUXr$_{(past)}$- in these examples has been phonologically reduced to the point of being almost imperceptible. That is, the strong hand begins the sign complex [AUX+V] with [4u] handshape flicking the fingers slightly, immediately followed by a change in handshape to that of the verb. This handshape

---

[35]This stative predicate is discussed in section 3.4.4. Here it should be noted that it appears without a complement in topic position.

change appears to occur during the Movement [M] segment of the verb. If the verb is a two-handed sign, the weak hand is already in position for the initial [4u] handshape of the strong hand. This indicates the most tightly bound auxiliary morpheme of all the FINISH auxiliaries looked at in this study and thus the [AUX-V] gloss is hyphenated.[36] A possible representation of the structure FINISH.AUXr$_{(past)}$-WORK is given in (107).

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[36](104) provides an illuminating contrast to (71), repeated here as (i) (but with the appropriate main verb label added).

(i) YESTERDAY PRO.1 FINISH.MAIN$_{(complete)}$ HOMEWORK$_{(noun)}$
    I finished my homework yesterday.

The verb DO.HOMEWORK has the rather complex structure [HMHMMH]. Of significance is the inability of the noun HOMEWORK to appear with the auxiliary FINISH.AUX$_{(past)}$-, and of the verb DO.HOMEWORK to appear with the main verb FINISH.MAIN, shown in (iii) and (iv). This shows clearly the difference in function between the main verb and the auxiliary.
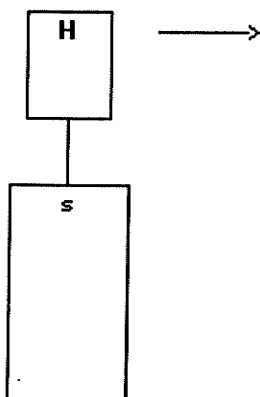
(ii) *PRO.1 FINISH.AUX$_{(past)}$-HOMEWORK$_{(noun)}$
(iii) *YESTERDAY PRO.1 FINISH.MAIN$_{(complete)}$-DO.HOMEWORK

(107) FINISH.AUXr$_{(past)}$-WORK

STRONG:
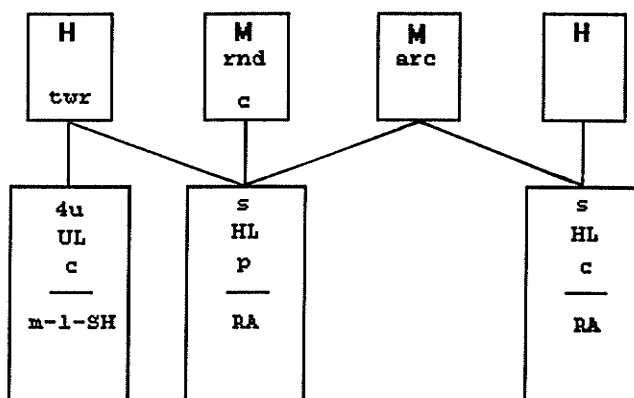
WEAK:

Key: [rnd, c] first Movement is circular toward then away from
the weak hand, with contact on the radial side of the weak
hand "fist" (s handshape), [s, HL, p, RA] strong hand "fist"
handshape, heel proximal to location on weak hand radial side
of "fist", [s, HL, c, RA] final hold in contact with weak hand
location

Once again, FINISH.AUXr$_{(past)}$- cannot be negated with NOT, nor

can it be topicalized away from the verb it is auxiliary to.

While the status of FINISH.AUXr$_{(past)}$- as a past marker must be

considered tentative in this study, it can be seen as the end

point of the grammaticalization chain under discussion. It is

possible that it is an emerging use of the auxiliary evolved

from FINISH.MAIN, and tends to be used when the time-frame of

the clause is not clear by other means. As such, the grammaticalization pathway with the past marker addition is given in (108).

(108)   FINISH.MAIN$_{(complete)}$
                      [HMH]
                    (V + NP)
                       |
                  FINISH MAIN
                      [H]
            (V + Clausal Complement)
                       |
                  FINISH.AUX$_{(ant)}$
                      [H]
                   (AUX + V)
                       |
                  FINISH.AUXr$_{(perf)}$
                      [H]
                   (AUX + V)
                       |
                  FINISH.AUXr$_{(past)}$ -
                      [H]
                   (AUX + V)
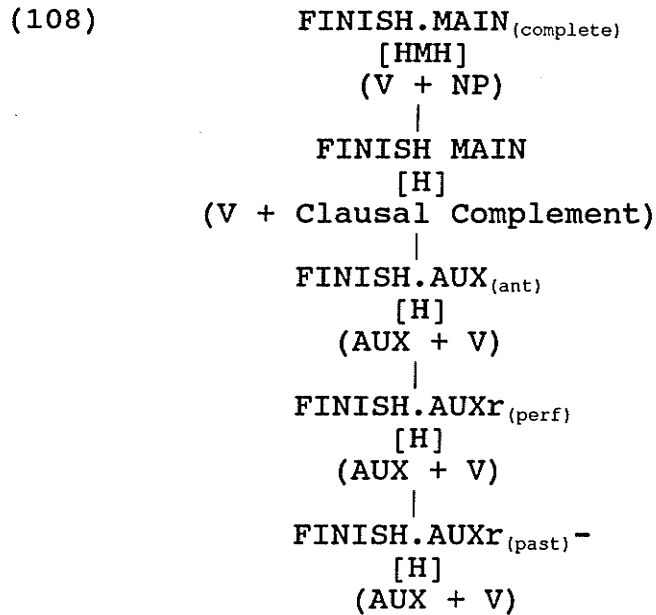
3.4.3.3 Summarizing the Auxiliarization of FINISH.MAIN

While it is clear that there is progressive movement away from the completeness or finality expressed by FINISH.MAIN$_{(complete)}$ and FINISH.MAIN as main verbs, it is also evident that there is a reanalysis of sentence structure. That FINISH does not fit neatly into one semantic or lexical category is typical of the grammaticalization process causing "hybrids" that overlap categories (Heine, Claudi and Hünnemeyer 1991) and are characterized, especially during earlier stages, by much ambiguity (Hopper 1991). Auxiliarization takes place when reanalysis, or "constituent-internal reanalysis" as Heine and Rey (1984) call it, causes constituent boundaries to be redefined along the line of (109)

-115-

from Heine, Claudi and Hünnemeyer (1991:168).

(109)   (A,B) C → A (B,C)

Often this means that a biclausal construction is reanalyzed, or grammaticalized, as a single clause, as is the case in Teso, an Eastern Nilotic language (Nilo-Saharan family) found in western Kenya and eastern Uganda (Heine, Claudi and Hünnemeyer 1991, taken from Hilders and Lawrence 1956) shown in (110).

(110) mam petero e-kot.o   eki ok (1991:169)

     not Peter 3sg-want dog

     Peter does not want a dog.

This sentence has an earlier form with e-*mam petero* as the main clause meaning 'it is not Peter' followed by the subordinate clause e-*koto eki ok* '(who) wants a dog'.

This type of reanalysis characterizes the FINISH.MAIN to FINISH.AUXr$_{(past)}$ grammaticalization chain where FINISH is clearly a verb at one end, but an auxiliary at the other. Desemanticization has taken place, in that the specificity of the meaning (completeness, finality) of the verb FINISH no longer holds, and has become so general by the end of the chain, that it simply signals that an activity has occurred before the time of speaking. Decategorization has progressed, in that as FINISH becomes more auxiliarized, it ceases to function as a verb. The complement verb takes over as the main verb of the clause. Cliticization takes place as FINISH moves down the grammaticalization chain, until erosion is

clearly evident, in that the auxiliary becomes an unstressed syllable, and is significantly reduced phonologically. What is abundantly clear is that the morphemes discussed in this section are not discrete points, but rather fall along a continuum both semantically and phonologically.

As mentioned previously, records have not been available to check the diachronic progression of FINISH as a main verb into a past marker, but what has been described is similar to general grammaticalization processes. Bybee, Perkins and Pagliuca (1994) report a number of instances where languages have developed anteriors from either action or stative verbs, and from there developed either perfectives or past markers. Heine (1993) similarly concludes that a typical chain of grammatical function is that in (111).

(111) completive/ > perfect(anterior) > perfective > past
       resultive

The morphemes related to FINISH described above indicate that this analysis can be applied to ASL. Syntactic reanalysis can also be interpreted from the above discussion, following Heine, Claudi and Hünnemeyer's (1991) realignment shown in (109) above, that is, a shift from (A,B) C to A (B,C) as in (112).

(112) (NP FINISH.MAIN) COMPLEMENT → NP (FINISH.AUX VERB)

The auxiliarization of FINISH.MAIN is summarized in Table 3.1 below. The column headed by "Complement" notes whether FINISH is followed by an NP or clausal complement, or is a part of a verb complex with a verb other than FINISH as the

-117-

main verb. Under "Topic", "Yes" indicates that FINISH or its
complement can appear in topic position, and therefore
separated from the other element it is dependent upon without
becoming ungrammatical, or without significantly altering the
meaning of the sentence. The "Free/Bound" column describes
what appears to be the most commonly occurring form, either a
free morpheme, or bound to the emergent main verb. Question
marks indicate that either of the given choices are as likely
to occur.

Table 3.1. Grammaticalization of FINISH from main verb
to past marker

Gloss	Word Class	Comple- ment	Phonol. Reduction	Negation (NOT-FINISH)	Topic	Free/ Bound
FINISH. MAIN$_{(complete)}$	V	NP	No	YES	Yes	F
FINISH. MAIN	V	Clause	No	Yes	Yes	F
FINISH. MAIN/ FINISH. AUX$_{(ant)}$	V/AUX	Clause/ Verb complex	?	?	?	F
FINISH. AUXr$_{(perf)}$	AUX	Verb complex	Yes	No	No	F
FINISH. AUXr$_{(past)}$-	AUX	Verb complex	Yes	No	No	B

3.4.4 *The Second Grammaticalization Pathway: From BE.FINISHED
to Functional Morphemes*

In the previous section FINISH was described as, first,
developing two phonological forms [HMH] and [H], and, second,
as grammaticalizing from the [H] form to a series of

auxiliaries. All of these were found to be preverbal, developing from a transitive verb. FINISH as a functional morpheme occurs postverbally as well, however, and this postverbal set of morphemes is the next topic of discussion, analyzed as developing along a second grammaticalization pathway, through a stative predicate BE.FINISHED. According to Givón, the argument of a stative predicate is most likely a "patient of state", the one whose state the proposition describes (1984:88).

That there exists a relationship between the main verb FINISH and the stative predicate BE.FINISHED is clear, but a discussion of the development of one from the other must remain spectulative, given the lack of historical data. This uncertainty is compounded, given that the stative predicate BE.FINISHED also has two phonological forms [HMH] and [H] identical to FINISH.MAIN$_{(complete)}$ [HMH] and FINISH.MAIN [H]. The difference is syntactic: BE.FINISHED is clause-final, as will be seen below. In this study, no attempt is made to resolve whether the stative predicate evolved from the main, transitive verb, even though this might seem the most logical because it reflects a deliberate action on the part of a human, whereas BE.FINISHED reflects the result of that action, or the transitive verb from the stative predicate. Foley and van Valin (1984) based on Dowty (1979), on the other hand, claim that stative predicates are more basic, and achievement, activity and accomplishment verbs are based on a stative

predicate with the addition of operators or connectives. These two possibilites are schematized in (113).

(113) a.
$$\text{FINISH.MAIN}_{\text{(complete)}} \quad [\text{HMH}]$$
$$\diagup \qquad \diagdown$$
$$\begin{array}{cc} \text{FINISH.MAIN} & \text{BE.FINISHED}_{\text{(complete)}} \\ [\text{H}] & [\text{HMH}] \\ & (\text{NP + stative predicate}) \end{array}$$

b.
$$\begin{array}{c} \text{BE.FINISHED}_{\text{(complete)}} \\ [\text{HMH}] \\ (\text{NP + stative predicate}) \\ | \\ \text{FINISH.MAIN}_{\text{(complete)}} \\ [\text{HMH}] \\ | \\ \text{FINISH.MAIN} \\ [\text{H}] \end{array}$$

Which possibility, either (113a) or (113b) is the case is left for further study. Here, rather, our discussion is focussed on the evolution of morphemes along subsequent grammaticalization chains.

In the following section, we will see that BE.FINISHED as a stative predicate also grammaticalizes into several functional morphemes. First, however, I will examine BE.FINISHED as a stative predicate with [HMH] and [H] structure.

The simplest examples are given in (114) and (115), where the predicate functions as a whole clause. Because ASL is an optionally null argument language, no overt subject is needed.

(114) (The signer has been working on the wording for a
       resolution to be presented to the membership of an
       organization he belongs to, and has just completed it)

    (PRO.1) BE.FINISHED$_{(complete)}$ [HMH]

    I am all finished (for good).

(115) (The signer has been writing a first draft of a
       resolution, and the addressee has agreed to make
       suggestions)

    (PRO.1) BE.FINISHED [H]

       I am finished (this rough draft, until you've checked it
           over).

The sense of (114) and (115) is that some state of completion

has been reached. These two examples differ, however, in a

similar manner as FINISH.MAIN$_{(complete)}$ [HMH] and FINISH.MAIN [H]

in   that   BE.FINISHED$_{(complete)}$ is   understood   as   final   or

unquestionable (finished for good), but for BE.FINISHED, the

semantic notion of completion has broadened to refer to

situations that may be seen as temporary. In other words, the

sense of finality of the completion has been lost. Several

further examples with an inanimate subject also illustrate

this distinction. These are given in (116) and (117).

(116) (The signer is leaving the theatre and meets a friend
       outside)

    DRAMA BE.FINISHED(complete) [HMH]

    The play is over for good (because the run is over and
        this was the last performance).

(117) DRAMA BE.FINISHED [H]

    The play is over (for tonight).

Similar to our previous discussion of FINISH.MAIN$_{(complete)}$ and

FINISH.MAIN, no assumption can at this time be made that

BE.FINISHED as [H] is a phonological reduction of [HMH], but semantically it has generalized. I suggest, then, that BE.FINISHED can be interpreted as the first step in a grammaticalization chain away from BE.FINISHED$_{(complete)}$. This is shown in (118).

(118)   BE.FINISHED$_{(complete)}$
                    [HMH]
           (NP + stative predicate)
                    |
             BE.FINISHED
                    [H]
           (NP + stative predicate)

Frequently, BE.FINISHED$_{(complete)}$ and BE.FINISHED appear at the end of a clause containing another verb, such as in (119) to (122). A pause following the first clause is frequently observed.

(119) EAT SANDWICH BE.FINISHED$_{(complete)}$

I am finished eating the whole sandwich.

(120) THIS-MORNING TEACH CLASS, BE.FINISHED$_{(complete)}$

This morning I taught class (and now) I am finished for
     good (because the course is over).

(121) EAT SANDWICH BE.FINISHED

I am finished eating the sandwich (although I couldn't
     eat it all).

(122) THIS-MORNING TEACH CLASS, BE.FINISHED

This morning I taught class (but now) I am finished (for
     the day).

In (119) and (120) we have the full semantic sense of finality. In (119) the entire sandwich is consumed, and in (120) not just that morning's class is over, but the entire

course. BE.FINISHED in (121) and (122) do not share this sense. Instead the activity has been completed, but the object is not so entirely affected. In (121) BE.FINISHED is a comment on the activity of eating, but does not suggest that the sandwich is all gone. In (122) the morning's class has been taught, but the course is not over. The state of being finished teaching is in fact temporary, until the next day.

Typically, this use of FINISH is treated as either an anterior, perfective, or completive marker, exemplified by Fischer and Gough (1972), Friedman (1975) and Valli and Lucas (1992). While it is the case, as I argue below, that several such grammatical morphemes do occupy this syntactic position, I suggest that BE.FINISHED$_{(complete)}$ and BE.FINISHED in (119) to (122) are whole predicates.

First, and most convincingly, pronominal insertion is possible in (119) to (122), rendering (123) to (126).

(123) EAT SANDWICH, PRO.1 BE.FINISHED$_{(complete)}$

(124) THIS-MORNING TEACH CLASS, PRO.1 BE.FINISHED$_{(complete)}$

(125) EAT SANDWICH, PRO.1 BE.FINISHED

(126) THIS-MORNING TEACH CLASS, PRO.1 BE.FINISHED

This suggests that if a pronominal subject can be inserted before BE.FINISHED$_{(complete)}$ and BE.FINISHED, they must be considered as separate clauses instead of auxiliary particles. These sentences, then, are biclausal, and as Heine (1993) suggests, are an example of syntactic iconicity in that the ordering of the clauses represents the temporal ordering of

the events (the activity takes place, and then ends).

Second, BE.FINISHED(complete) and BE.FINISHED in (119) to (122) carry normal stress. As a result, NOT can cliticize to the stative verb, and the clause containing the activity verb, already in first position, can be marked as topic while BE.FINISHED(complete) and BE.FINISHED remain as comment constituents. It would not be uncommon for these two phenomena to occur together as in (127) to (130).[37]

<div align="center">_____t_</div>

(127) EAT SANDWICH, NOT-BE.FINISHED(complete)

    As for eating the sandwich, I am not finished the whole
        thing.

<div align="center">_____t_</div>

(128) THIS-MORNING TEACH CLASS, NOT-BE.FINISHED(complete)

    This morning I taught class (but) I am not finished
        (because the course is not over).

<div align="center">_____t_</div>

(129) EAT SANDWICH, NOT-BE.FINISHED

    I am not finished eating the sandwich (although I may
        not eat it all).

---

[37]Interestingly, marking the entire first clause as topic produces the identical sentence structure as does topicalizing the complement of the main verbs FINISH.MAIN(complete) and FINISH.MAIN. The difference may be akin to:

(i) I did not finish painting the house, and
(ii) I am not finished painting the house.

Whether or not this difference is significant in ASL, or which would be the more accurate analysis, is open to question. Nonetheless, whichever proves to be the more desirable analysis, the claim that BE.FINISHED(complete) and BE.FINISHED act as verbs and not auxiliary particles is not nullified.

<pre>   t
</pre>
(130) THIS-MORNING TEACH CLASS, NOT-BE.FINISHED

     This morning I taught class (but) I'm not yet finished
       (for the day).

The biclausal nature [S+BE.FINISHED] of these sentences is apparent in several more examples in which an overt topical NP is not the subject of BE.FINISHED. In these sentences, given here in (131) and (132), the topical NPs BOOK and NEWSPAPER are inanimate objects of the verbs GIVE in (131) and PUT.DOWN in (132).

<pre>   t
</pre>
(131) BOOK BE.FINISHED$_{(complete)}$, $_2$GIVE$_1$

     As for when you are finished with the book, give it to
      me/give me the book when you are finished with it.

(132) NEWSPAPER PUT.DOWN, BE.FINISHED

     I put down the newspaper after I was finished (reading
      it).

In (131) the signer's eye-gaze is directed at the addressee as BE.FINISHED$_{(complete)}$ is signed,[38] indicating that the addressee is the subject of BE.FINISHED$_{(complete)}$ rather than BOOK. This is perhaps borne out in the signer's use of $_2$GIVE$_1$, suggesting, because the movement of the verb begins from the direction of the addressee (2nd person, or PRO.2), that the book is originally in the possession of the addressee. A clearer example is found in (132). Here BE.FINISHED is not a comment

------

[38]Eye-gaze is not discussed in this study, but eye-gaze to the addressee or to a locus in the signing space as an NP is signed lexically has a similar function to the overt indexical point which signals a proniminal. This is discussed, for example, in Baker and Cokely (1980).

on the action of PUT.DOWN, but according to my consultant, is semantically related to the prior (and unstated) act of reading the newspaper. If BE.FINISHED was analyzed as an anterior or perfective as Fischer and Gough (1972), Friedman (1975) or Valli and Lucas (1992) might suggest, the expected reading would be "I already/did put down the newspaper", but this is not the case. Whether or not the change from [NP+BE.FINISHED] to [S+BE.FINISHED] constitutes a diachronic progression is unclear. However, both instances are analyzed as clauses composed of a stative predicate, and both have an NP in initial position, that is, either an overt or a null NP. No claims, then, are made regarding movement along a grammaticalization pathway.

3.4.4.1 Completive Aspect and Anterior

This section explores functional morphemes that can be interpreted as having grammaticalized from BE.FINISHED$_{(complete)}$ and BE.FINISHED. Bybee, Perkins and Pagliuca (1994) and Heine (1993) both claim that it is common to find an anterior emerge from a completive aspect marker. ASL has both as clause-final elements, but their phonological structures suggest slightly different sources. That is, the anterior has a [H] structure similar to BE.FINISHED [H], while the completive aspect marker has a [HMH] structure like that of BE.FINISHED$_{(complete)}$. Each of these will be examined in turn.

a) Anterior

As was suggested in 3.4.3.2, this anterior competes with

the preverbal anterior auxiliary. This one appears to have won. In the data collected for this study, my consultants could find no difference in meaning between the preverbal and clause-final anterior, although it was clear that the clause-final anterior was preferred. Examples are given in (133) to (135). The anterior is given the label BE.FINISHED$_{(ant)}$.

(133) (PRO.1) EAT-BE.FINISHED$_{(ant)}$ [H]

I already ate (so I'm not hungry now).

(134) $\overline{\text{THAT MOVIE,}}^{\ \ \ \ \ \ \ \ t}$ (PRO.1) SEE-BE.FINISHED$_{(ant)}$ [H]

As for that movie, I've seen it/I've seen that movie (so let's go to something else).

(135) $\overline{\text{MAN BRING BOOK-BE.FINISHED}}^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ t}_{(ant)}$, YESTERDAY

As for when the man brought the book, it was yesterday/the man brought the book yesterday (so now we have it).

In these sentences, several things are clear. First, semantically the sense of BE.FINISHED$_{(ant)}$ is not so much that an event has been completed, but that the event happened previously, but with some current relevance. Second, there is no pause between the verb and BE.FINISHED$_{(ant)}$, and in the case of (135), the object NP BOOK and BE.FINISHED$_{(ant)}$. In fact, BE.FINISHED$_{(ant)}$ has cliticized onto the element to its left. Several questions regarding this phenomenon, however, remain unresolved, and as such invite further investigation. When the anterior BE.FINISHED$_{(ant)}$ and the element to its left form a complex, if BE.FINISHED$_{(ant)}$ reduces phonologically at all, then it appears that the reduction is in the local

twisting movement [tw], which may be so slight as to be barely perceptible. Yet the sign may be held for an extended period of time, and may be articulated with either one hand or two. Thus again, this brings into question what the features of stress and reduction are for ASL. Further, it appears that for the complex [X-BE.FINISHED$_{(ant)}$], where "X" is the element to the left of BE.FINISHED$_{(ant)}$, it is the left-most member that undergoes clear phonological reduction. A good example is EAT-BE.FINISHED$_{(ant)}$ in (133). The normal Hold-Movement pattern for EAT would be [MMMH], shown in (136), but in (135) the structure of EAT-BE.FINISHED$_{(ant)}$ is [HMH], given in (137).

(136) EAT

```
  ┌──────┐   ┌──────┐   ┌──────┐
  │  M   │   │  M   │   │  H   │
  │ rnd  │   │ rnd  │   │      │
  │      │   │      │   │      │
  │  c   │   │  c   │   │      │
  └──────┘   └──────┘   └──────┘
       \      /    \      /
        \    /      \    /
  ┌──────────┐     ┌──────────┐
  │   B-o    │     │   B-o    │
  │   TIFI   │     │   TIFI   │
  │    p     │     │    p     │
  │   ───    │     │   ───    │
  │   CN     │     │   CN     │
  └──────────┘     └──────────┘
```
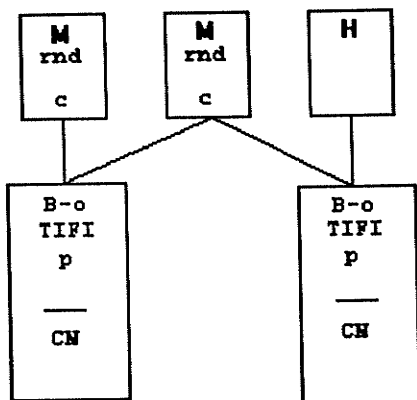
Key: [rnd, c] Movements are circular, approaching and moving away from the chin, [B-o, TIFI, p, CN] thumb and fingertips touch, proximal in front of the CHIN.

(137) EAT-BE.FINISHED(ant)

```
   H          M          H
            arc

  ┌─────┐          ┌─────┐
  │ B-o │          │ 4u  │
  │TIFI │          │ PA  │
  │  c  │          │  c  │
  │ ─── │          │ ─── │
  │ CH  │          │ ■-2-SH │
  └─────┘          └─────┘
```
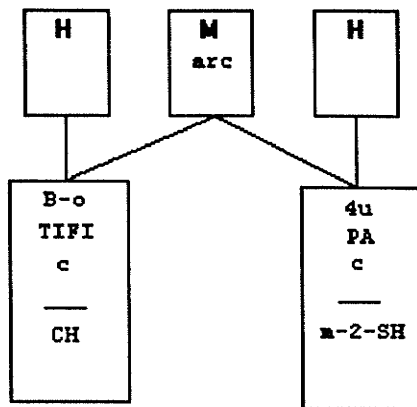
In (137) the entire movement sequence of EAT has been deleted,
with EAT being reduced to the initial handshape of the
resulting complex, which subsequently opens during the
movement segment to the final handshape of BE.FINISHED(ant) with
the local [tw] feature.

Heine and Reh (1984) note a similar process in Ewe, where
vɔ 'be finished' grammaticalizes into an anterior, shown in
(138).

(138) é-ɗu   nú   vɔ

      he-eat thing finish

      'He has eaten.'

Heine (1993) also suggests that this is the case in Bantu
languages where a completive or perfective aspect marker *-idɛ
(Proto-Bantu) has been derived from the post-verbal phrase "it
is finished", as in 'X does Y, it is finished". Heine claims
that at one stage this aspect marker cliticized on to the main
verb preceding it, and has since gone on to form the present-
day aspect suffix.

Syntactically, with the cliticized BE.FINISHED$_{(ant)}$, pronominal insertion cannot occur, the verb cannot be positioned in the topic without BE.FINISHED, and BE.FINISHED cannot accept NOT without altering its sense back to that of a full stative meaning "to be finished". (139) povides a good example of this anterior in a sentence with a marked topic and the negator NOT.

(139) $\overline{\text{EAT-BE.FINISHED}_{(ant)}}^{\;t}$, NOT

As for having eaten, I have not/I have not already eaten.

Sentence (139) shows both the verb EAT and the anterior marker -BE.FINISHED$_{(ant)}$ in the topic, and with NOT forming the comment.[39]

The grammaticalization chain that the above examples represent is given in (140).

(140)
BE.FINISHED$_{(complete)}$
[HMH]
(NP + stative predicate)
|
BE.FINISHED
[H]
(NP + stative predicate)
|
BE.FINISHED$_{(ant)}$
[H]
(-anterior)

b) Completive Aspect

The next morpheme to be addressed is the completive

---

[39]It is also common for an entirely different sign NOT-YET, a negative anterior, to be used instead of NOT in this context.

aspect with the form [HMH]. Bybee, Perkins and Pagliuca (1994) define completives as "to do something thoroughly and to completion" (1994:54). In this regard, this grammatical morpheme remains semantically close to the stative BE.FINISHED$_{(complete)}$, but it behaves similar to the anterior. Thus we see constructions such as (141) and (142). The completive marker is labelled -BE.FINISHED$_{(comp)}$.

(141) (PRO.1) EAT-BE.FINISHED$_{(comp)}$ [HMH]

    I ate it all.

(142) $\overline{\text{THAT MOVIE}}^{\text{t}}$, (PRO.1) SEE-BE.FINISHED$_{(comp)}$ [HMH]

    As for that movie, I finally saw it/I finally saw that movie (and never have to deal with it again).

These examples show a development parallel to BE.FINISHED$_{(ant)}$. The completive morpheme ceases to operate as its own clause, and instead becomes cliticized to the element to its left. Topic marking and negation with NOT are similar processes to BE.FINISHED$_{(ant)}$. Both of these aspect markers undergo syntactic reanalysis, following Heine, Claudi and Hünnemeyer (1991), as in (143).

(143) (NP Verb) Stative Predicate → NP (Verb-aspectual marker)

Schematically, BE.FINISHED$_{(comp)}$ is represented a as stage in a grammaticalization pathway evolving from the stative predicate. This is shown in (144).

(144)   BE.FINISHED$_{(complete)}$
                          [HMH]
                  (NP + stative predicate)
                    /   \
         BE.FINISHED   BE.FINISHED$_{(comp)}$
            [H]   [HMH]
   (NP + stative predicate)   (-completive)
             |
      BE.FINISHED$_{(ant)}$
            [H]
       (-anterior)
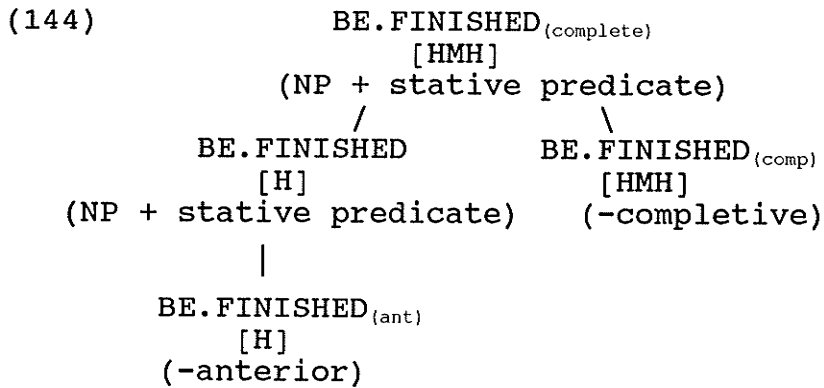
3.4.4.2 The Conjunction "and then"

A further instance of grammaticalization in ASL is a conjunction with the structure [HMH], and interpreted as having developed from BE.FINISHED$_{(complete)}$ [HMH]. This conjunction is labelled here as BE.FINISHED$_{(conj)}$, with examples given in (145) and (146).

(145) (The signer is describing events that took place earlier that day)

                                              _____ t
     TODAY MORNING PRO.1 TEACH CLASS, BE.FINISHED$_{(conj)}$, LEAVE

     This morning I taught class, and then (I) left.

(146) The signer is explaining the order of courses interpretation students must take)

                                          _____ t
     PRO.2 TAKE.UP B-T-S ENGLISH, BE.FINISHED$_{(conj)}$, SECOND

        B-T-S ASL

     You take "Building Translation Skills: English", and then "Building Translation Skills: ASL" after that.

BE.FINISHED$_{(conj)}$ in (145) and (146) has undergone a further semantic loss. Although it could be said that literally the sign means "(it) is finished", and of course this is its origin, grammaticalization has taken place.

-132-

Sandwiching BE.FINISHED$_{(conj)}$ between two clauses represents an iconic structure suggesting that an event or activity takes place, ends, and a second event or activity begins. BE.FINISHED$_{(conj)}$ has come to mean that one event or activity follows another.

It would seem that syntactically the stative predicate BE.FINISHED$_{(complete)}$ should move toward the first clause because it is the activity described by the verb in the first clause that is seen as being completed. This is, in fact, what takes place with the completive marker, as was discussed above. But the conjunction BE.FINISHED$_{(conj)}$ is marked as a topic, which indicates that it has "jumped ship" so to speak, because topics are clause-initial, and so its strongest syntactic link is with the clause that follows it. Topics are understood to be information that the speaker presupposes the addressee to have some prior knowledge about, and constructions such as (145) and (146) in ASL provide an interesting way of ensuring that the "old" information is, without question, available to the addressee, and therefore can be successfully presupposed as known. As (147a) shows, the information (A) is presented in the first clause, is referred to as having taken place in the topic, and subsequent "new" information is presented in the final clause (B). This then translates more simply as (147b).

(147) a. A, given that we understand A to have taken

place, B

b.　A, and then B

Note that in (146) BE.FINISHED$_{(conj)}$ indicates that the event in the final clause is to follow the event in the first clause, but does not mean that the first event *has* taken place. The anterior particle BE.FINISHED$_{(ant)}$ with [H] structure, most likely in combination with the nonmanual head nod, is used to mean this. Compare (146), repeated here, with (148).

$$\overline{\qquad\qquad\qquad\text{t}}$$
(146) PRO.2 TAKE.UP B-T-S ENGLISH, BE.FINISHED$_{(conj)}$, SECOND

　　　　B-T-S ASL

　　　You take "Building Translation Skills: English", and
　　　then "Building Translation Skills: ASL" after that.

$$\overline{\qquad\qquad\qquad\qquad\qquad\text{nod}}$$
(148) PRO.2 TAKE.UP B-T-S ENGLISH-BE.FINISHED$_{(ant)}$, SECOND

　　　　　B-T-S ASL

　　　You have taken "Building Translation Skills: English",
　　　so next is "Building Translation Skills: ASL".

Last, we can see that BE.FINISHED$_{(conj)}$ stands alone as a topic constituent, and does not undergo any phonological reduction, as the stress/reduction test would predict. If negation is attempted with NOT, however, the meaning and function of BE.FINISHED appear to revert back to that of a full stative predicate, as in (149), but which renders the sentence semantically incoherent.

$$\overline{\qquad\qquad\qquad\text{t}}$$
(149) *PRO.2 TAKE.UP B-T-S ENGLISH, NOT-BE.FINISHED$_{(conj)}$,

　　　　SECOND B-T-S ASL

The pronominal insertion test results in a grammatically allowable sentence, although the consultants for this study

-134-

suggested that it rarely, if ever, occurs. Pronominal
insertion is shown in (150).

$$\overline{\hspace{3cm}}^{\text{t}}$$

(150) TODAY MORNING PRO.1 TEACH CLASS, PRO.1 BE.FINISHED$_{(conj)}$,

LEAVE

This morning I taught class, and then (I) left.

The conjunction, given these facts, may be seen neither as a
full verb nor an auxiliary particle, but rather as a hybrid,
following Heine (1993). That is, it displays qualities of
both, which suggests that it may not yet be fully
grammaticalized, but on its way.

The grammaticalization pathway discussed in this section
extends as in (151) to include the conjunction.

(151)   BE.FINISHED$_{(complete)}$
                        [HMH]
                 (NP + stative predicate)
                /   \
        BE.FINISHED   BE.FINISHED$_{(comp)}$
            [H]   [HMH]
    (NP + stative predicate)   (-completive)
            | |
        BE.FINISHED$_{(ant)}$ BE.FINISHED$_{(conj)}$
            [H]   [HMH]
        (-anterior)   (S + conjunction + S)

3.4.4.3 A Summary of the Grammaticalization of BE.FINISH

The above two sections show synchronic data that suggest
the stative predicate BE.FINISHED$_{(complete)}$ has undergone
grammaticalization on several fronts. First, both
BE.FINISHED$_{(complete)}$ [HMH] and BE.FINISHED [H] were seen to
occur, and following this split, each was seen to have non-

-135-

verbal senses derived from them. In this study, the grammaticalization of BE.FINISHED$_{(complete)}$ [HMH] is referred to as a single, and arbitrarily the "second", chain. The decision to denote the grammaticalization of BE.FINISHED$_{(complete)}$ and of FINISH.MAIN$_{(complete)}$ as two distinct pathways was based primarily on syntactic grounds, that one pathway contained preverbal morphemes, and the other, clause-final. In any case, it is clear that polygrammaticalization has taken place, that is, grammaticalization along several differing pathways but each stemming from the same source, in this case, the sign most basically glossed as FINISH.

There is evidence that the above described morphemes do not form a complete list. For example, one additional function of BE.FINISHED [H] is that of an exhaustive marker, signalling that an exhaustive list has been given, or that a total number has been reached. An example is given in (152), in which the morpheme receives the label BE.FINISHED$_{(exhaustive)}$.

(152) (PRO.3) HAVE THREE CHILD BE.FINISHED$_{(exhaustive)}$

    She has three children (and that's all)/She has just the
       three children.

This and other possibilities, such as the inchoative marker and an emphatic marker, are left for further study. Bybee, Perkins and Pagliuca (1994), interestingly, suggest that each of these exist in other languages as extentions of either an anterior, for the inchoative, and completive marker, for the exhaustive and emphatic sense.

Characteristics of those morphemes discussed in 3.4.4 are

given in Table 3.2 below. "Yes" and "No" as column entries indicate the most likely occurence, and once again, question marks denote that either choice (yes or no) is equally possible.

Table 3.2. Grammaticalization of BE.FINISHED(complete) as a stative predicate

Gloss	HM Structure	Phonol Reduc.	Pronom Insert.	Negation	Topic	Free/ Bound
BE. FINISHED(complete)	[HMH]	No	Yes	Yes	Yes	F
BE. FINISHED(comp)	[HMH]	Yes	No	No	No	?
BE. FINISHED(conj)	[HMH]	No	?	No	Yes	F
BE. FINISHED	[H]	No	Yes	Yes	Yes	F
BE. FINISHED(ant)	[H]	?	?	No	No	B

3.5 Nonmanual Tense Inflection

What the above discussion on the grammaticalization of FINISH has not yet taken into account are the nonmanual markers which frequently accompany the lexical sign. As was seen in Chapter 2, some nonmanual markers encode lexical information in that they code certain adjectives such as "small" and "huge" or manner adverbs such as "carelessly". Others are functional in nature, marking topic constituents, or sentences as polar or Wh- questions, for example.

In this section I look at the possibility that a set of nonmanual markers--facial and body postures--affixes to verbs

to mark them as tensed. The discussion presented below does not seek to be definitive. Rather, it reports and comments on a set of nonmanual markers consistently occurring in the corpus of ASL sentences gathered in this study. It is clear that this area of ASL grammar requires further research.

Early attempts at understanding how ASL expresses past, present and future, as discussed in Chapter 1, first focussed on lexical signs, primarily time adverbs, articulated along a time-line whereby the present is represented by signs positioned immediately in front of the signer's body, the future by signs that extend out in front of the signer, and the past by signs moving in a direction back or behind the signer (Friedman 1975, Frishberg 1979, Baker and Cokely 1980). Friedman (1975) also notes that moving the head or body slightly backward indicates a past-time reference, while moving the head or body slightly forward indicates a reference to future time. For present time, the body remains upright, which could be said to be an unmarked position.

Jacobowitz and Stokoe (1988) propose that some verbs are inflected for past by flexion of the shoulder or elbow joint, causing the sign to be articulated in a position lower or somewhat closer to the signer's body than would be the position for the unmarked present. Extension of the shoulder or elbow joint, they claim, inflects the verb for future reference. Jacobowitz and Stokoe list 27 verbs for which they find flexion for past tense and extension for future tense

taking place. While the possibility of physical flexion and extension during the articulation of verbs in ASL is not questioned, the claim that these features mark tense is not supported in the current study. Nontheless, Jacobowitz and Stokoe make an important contribution in suggesting that something other than lexical temporal adverbs and time phrases do contribute to time referencing in ASL.

Several examples of processes in ASL that prevent the kind of flexion and extension Jacobowitz and Stokoe claim are as follows. First, agreement verbs take into account the height of the subject and object referent, whether or not the referent is physically present. If not present, the signer assigns the NP to an arbitrary locus. Liddell (1990) argues that because each verb has a built-in height feature for animate arguments, the final Hold position is affected by that height. For example, the verb GIVE has a final Hold at the actual chest level of the recipient, or the perceived chest level if the recipient is 3rd person, imagined by the signer and has been assigned to a locus. Flexion or extension would alter this height feature, producing an ungrammatical utterance.

Second, spatial verbs are analyzed by Padden (1988, 1990) as taking a locative affix. In other words, a locus is a beginning or end point for the movement of the verb, but it is not subject and object pronominals that are assigned to the loci, rather, the loci designate locations. For example, PUT

-139-

(or PUT.DOWN) can be signed once a location has been assigned to a locus, which is then affixed to the final Hold of PUT. If this location has been designated as, say, a table top, the location feature of the final Hold of PUT must coincide exactly with the locus containing the locative. If the two do not coincide, for example because of flexion or extension, the location feature of the final Hold would be at some location other than at the table top, and the addressee would understand the signer to mean that what was supposed to be put on the table never got there.

It can be seen, then, from these rather iconic features of ASL, that spatial constraints can, and often do, supercede the availability of simple flexion and extension to refer to past and future time.[40]

In the current study, a number of facial and body gestures are observed to accompany verbs. These nonmanual markers indicate a five-way distinction in indicating time reference. They are:

a) Remote Past - chin raised, pursed lips, a head nod,

furrowed brow, eye squint, puffed cheeks

b) Near Past - chin in, lips (but not teeth) slightly apart

---

[40]Of interest is that signs are frequently extended farther out from the signer if larger spatial distance is referred to, and drawn in toward the signer if designating close proximity. Perhaps a metaphoric extension of this to time is what motivates Jacobowitz and Stokoe's claim, even though they argue that the time line (Friedman 1975, Cogen 1977, and others) is irrelevant to their proposed system of marking tense on ASL verbs.

and corners of the mouth down, head turned

slightly to the ipsilateral side,

ipsilateral shoulder raised toward the

cheek or the shoulders and torso pulled

slightly back

c) Untensed - unmarked[41]

d) Near Future - chin in, shoulders in, head slightly forward,

corners of the mouth raised (mouth may be

slightly open)

e) Remote Future - chin up, wrinkled nose, pronounced frown,

head tilted forward

It appears that not all nonmanual features for each time distinction are necessarily produced together. This suggests that, similar to nonmanual topic markers, a principle of prototypicality is in operation. In fact, it is apparent that, for example, a very slight pulling back of the chin sufficiently indicates past reference. It is also apparent, although I would suggest that this requires further investigation, that if other grammatical or pragmatic feature clearly places the event in a particular time-frame, nonmanual tense marking may not be obligatory, and thus the unmarked case may be untensed and not specifically referring to the present, but present time reference is not otherwise marked. But when consultants for this study were presented with ASL

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[41]When a sense of immediacy is conveyed, nonmanual features similar to those of the near future are articulated.

sentences containing nonmanual time reference markers described above that contradicted a discourse context suggesting an actual time-frame, these sentences were judged as unacceptable. Examples are given below.

(153) to (157) illustrate each of the five time distinctions. Nonmanual markers are once again given above the lexical item they accompany, and are abbreviated as "rp" (remote past), "np" (near past), ∅ (untensed), "nf" (near future), and "rf" (remote future).

```
        __rp
(153) MAN BRING BOOK
```

The man brought the book (some time ago).

```
        __np
(154) MAN BRING BOOK
```

The man brought the book (just now).

```
                 _____t
        ___∅              ____np
(155) MAN BRING BOOK,  YESTERDAY
```

      As for the man's bringing the book, it was yesterday/the
      man brought the book yesterday.

```
        __nf
(156) MAN BRING BOOK
```

The man will bring the book (soon).

```
        __rf
(157) MAN BRING BOOK
```

The man will bring the book (some time from now).

These examples show that nonmanual marking can clearly mark a verb for a specific time, especially considering that except for (155), the lexical content of each is identical. (155) suggests that the verb in the topic is unspecified for tense,

but the time reference of the event is then given in the comment. Of significance, YESTERDAY is accompanied by nonmanual near past marking, as is typical for temporal adverbs as well as for aspect markers such as those grammaticalized from FINISH as described in 3.4 above.[42] It is possible, albeit speculative, that these nonmanual markers originate as regular features of the lexical temporal signs LONG.AGO[43], RECENT shown in Figure 3.5, and of FUTURE.ADV as described in 3.4.1.2 above, but have shifted onto the verb or co-occur with the verb if a temporal adverb also appears in the clause. Data collected for this study did not address these nonmanual markers fully, but as mentioned, this topic should be examined at length at a later time.

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[42]These nonmanual markers were omitted in the above sections to minimize the description of simultaneously occurring grammatical features until a more complete discussion could take place.

[43]See Figure 3.1c.

Chapter 4

Conclusions

Previous analyses of time referencing in ASL has primarily focused on either a time-line that extends from behind the signer, representing past events, to space extending in front of the signer, representing future events, or on time adverbs that follow a "time reference first" rule. In addition to these phenomena, there has been limited discussion of temporal aspect marking. Even the identification of tense/aspect markers has been minimal.

Prior descriptions of temporal adverbs, as mentioned, have argued that the time reference of events is set by positioning these adverbs sentence-initially, and verbs that follow are understood to be of that time-frame until a different time reference is set. Evidence in the present study has shown, however, that this analysis is too simplistic and does not account for grammatical structures in which time adverbs appear postverbally, and yet the event described by the verb is placed within some time reference. Specifically, I have shown that the positioning of time adverbs is better described as motivated by topic-comment structure. That is, in sentences with clearly marked topics, time adverbs can fall in initial and final position of the topic, and initial and final position of the comment. When topics are not morphologically marked, time adverbs can only be positioned sentence-initially or sentence-finally. The medial positions

(topic-final and comment-initial) are disallowed.

With this in mind, I have explored another component of tense/aspect in ASL, that of the various forms of FINISH. FINISH, with a seemingly wide range of meanings, has been studied to some extent, but past descriptions have tended to look at the uses individually. In this study, however, I have attempted to find some order to the functions and meanings associated with FINISH, considering them polysemous to a greater or lesser degree, and approaching their analysis from a point of view known as grammaticalization theory.

Grammaticalization is said to occur when morphemes that are more lexical slowly develop in to more grammatical morphemes. Of course the underlying principle is that this is a diachronic process, but even when diachronic evidence is unavailable, synchronic data can lead to the interpretation of related grammatical, or functional, morphemes as having evolved from earlier, lexical forms. Verbs, for example, grammaticalize into tense/aspect/mood (TAM) markers, and "finish" or "be finished" is a common source for TAM markers in a number of languages. Links along grammaticalization chains are not considered discrete, but are often "hybrid", that is, they display characteristics of more than one category.

In ASL, FINISH as a main verb and BE.FINISHED as a stative predicate, undeniably related both phonologically and semantically, can be understood to have developed into a host

of tense/aspect markers. In this study, I have described a number of these morphemes and attempted to reconstruct grammaticalization chains that chart their relationship to other forms. Because this analysis has found several such chains, all with FINISH as their source, I have adopted the term "polygrammaticalization" from Craig (1991).

The data in this study suggest that FINISH as a main verb has developed a series of auxiliaries analyzed along a grammaticalization chain:

verb [HMH] > verb [H] > anterior > perfective > past

Second, BE.FINISHED as a stative verb has developed a set of clause-final particles and functional morphemes along two avenues according to their phonological structure. These are:

stative verb [HMH] > stative verb [H] > anterior [H]

and:

stative verb [HMH] > completive [HMH] > conjunction [HMH]

This analysis explains the structure of many constructions in which FINISH is an element.

I have paid particular attention to the phonological structure of the morphemes related to FINISH, showing first that there are two distinct verbs, FINISH.MAIN$_{(complete)}$ [HMH] and FINISH.MAIN [H], and second, that grammatical morphemes developing from them behave in decidedly different ways.

Finally, I have given evidence that nonmanual markers may also play an important role in the tense/aspect domain, and propose a five-way distinction in time: remote past, recent

past, unmarked (commonly, but not exclusively, used in present time references), near future, and remote future. These results remain speculative.

Some of the difficulty in analyzing a signed language such as ASL is that notions about what constitutes language are challenged, but I would suggest that this stems from unfamiliarity more than anything. Grammatical structures in ASL are not all that well understood, and I hope to have provided some insight into the morphology and syntax of ASL through this study. Of course there are many areas still to address and several of these have surfaced in the development of this thesis. Some of these are:

1. Further definition of the features of topic-comment structure in ASL. For example, do topics serve a discourse function in relative time marking? What is the nature of double topic marking? And third, how do the notions of topic and subject interact in ASL?

2. Additional work is needed in understanding the interaction of temporal adverbs and other elements of TAM marking in ASL.

3. This study looks at one set of tense/aspect markers in ASL, but others do exist, such as the FUTURE marker. A study needs to be made regarding these other items.

4. Which auxiliaries exist in ASL? This study looks at FINISH, but a number of others have been mentioned. If there is a class of auxiliaries, what are the members of this class, what are their common features, and how might they differ?

5. Of interest would be a study of other elements that appear to have grammaticalized from lexical items in ASL. As one suggestion, NOT was shown to have a normally stressed form and an unstressed cliticized form. There is a similarly constructed verb in ASL typically glossed DENY, that is articulated with the same handshape but with both hands, all of which point to a grammaticalization process. This and other such morphemes are targets for examination.

6. What is the nature of stress and phonological reduction in ASL? As we have seen, a number of morphemes show variation in this regard.

7. Several additional grammatical forms were mentioned that relate to FINISH, such as an inchoative, an exhaustive, and an emphatic marker. These appear to be candidates for further investigation.

8. Finally, a great deal more study could be made of nonmanual markers and time referencing.

Appendix 1

The following is a list of symbols used in the notation of ASL in this study. It should be noted that many of the symbols are also described in the text.

YESTERDAY Upper-case words indicate the English gloss representing an ASL sign

BE.FINISHED Two glosses separated by a period indicate that more than one word was used to describe the meaning and/or function of the ASL sign

NOT-MEET Hyphenated glosses signify that more than one sign have formed a morphological compex

B-I-L-L Hyphenated letters represent fingerspelled words

PRO.1/PRO.2/
PRO.3 1st, 2nd, and 3rd person pronouns

POSS.1/POSS.2/
POSS.3 1st, 2nd, and 3rd person possessive pronouns

$_a$LOOK.AT$_b$ Subscripted letters indicate spatial loci at which NPs have been positioned, and also represent subject and object ageement on the verb

$_1$LOOK.AT$_2$ Subscripted numbers indicate 1st and 2nd person agreement markers

CL Classifier

_____t Topic marker

_____y/n Yes/no question

_____nod positive head nod

_____neg Negative head nod

_____cond Conditional

_____rp Remote past

_____np Near past

_____nf Near future

<u> rf</u>	Remote future
#FUN*	# = fingerspelled loan sign
	* = emphatic
"WOW"+++	" " = a gesture
	+ = repeated movement

Other:

Mandarin:

PFV	Perfective aspect
EXP	Experiential aspect
CRS	Currently Relevant State

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