

## The Lexical Verb Sandwich in American Sign Language and the Hybrid Feature

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### 0. Introduction

In this paper, I will present an analysis of a variation of the Verb Sandwich construction in American Sign Language (ASL), called the Lexical Verb Sandwich<sup>1</sup>. The purpose of this project is to demonstrate that the Lexical Verb Sandwich can be derived without introducing any ASL-specific sentential structure. As will be shown in the derivation presented in the current study, the Lexical Sandwich construction is generated by Verb Raising similar to that proposed in analysis of the Dative Complement/Double Object Construction in English (Larson 1988.) Such an analysis of ASL with minimum language-specific apparatus should be favored considering the assumption that ASL is a natural language generated by the Universal Grammar. In the discussion section, it will be argued that the features that cause the overt verb raising in ASL are visible in more than one levels of representations: the features that must be licensed both before Spell-out and at the phonological component.

### 1. Lexical Verb Sandwich

The Lexical Sandwich construction, frequently used in native signer's narratives, was originally reported in Fischer and Janis (1992). While Fischer and Janis (1992) attempted to provide a unified account for all Verb Sandwich constructions, Matsuoka (1997: fn. 3) proposed to differentiate the Verb Sandwich into two types, the Lexical and the Aspectual Sandwiches. Examples of both types of the sandwich constructions are shown in (1) and (2), below.

#### Lexical Sandwich

- (1) H-A-R-O-L-D SWEEP[shape cl:B] FLOOR USE-BROOM-AROUND[handle cl:S-on-S: plural location]  
'Harold sweeps up the floor (with a broom)'  
(Fischer and Janis 1992)

#### Aspectual Sandwich

- (2) STUDENT NAME S-A-L-L-Y TYPE HER TERM PAPER  
TYPE[asp:cont]  
'A student whose name is Sally was typing and typing her term paper.'  
(Fischer and Janis 1992)

Both types of Sandwich constructions contain two occurrences of the same verb. However, in contrast to the Aspectual Sandwich, the verb in the Lexical Sandwich is signed with extra lexical information (e.g. Location or Instrument). For that reason, Matsuoka (1995, 1997) argued that the two types of the sandwich sentences undergo different derivational processes. Following that assumption, this paper will focus on the derivation of the Lexical Sandwich construction. See Matsuoka (1997) for a detailed analysis of the Aspectual Sandwich.

### 2. Two analyses for Verb Sandwich Constructions

In their analysis of the Sandwich constructions, Fischer and Janis (1992) proposed two different analyses. One is called the Functional Account. According to this analysis, an additional copy of the verb is generated when there are too many stranded arguments for one verb to license. However, this account is challenged by the following empirical problems. First, it fails to explain why the Verb Sandwich construction has a fixed order between the copied verbs. As seen in the example (1), repeated below, the word order of this construction is always S-V-O-V. The second copy of the verb carries the extra lexical information such as the instrumental. The Functional Account does not provide any reason why an extra copy of the verb must be inserted into any particular spot in the sentence.

- (1) H-A-R-O-L-D SWEEP[shape cl:B] FLOOR USE-BROOM-AROUND[handle cl:S-on-S: plural location]  
'Harold sweeps up the floor (with a broom)'

Secondly, the Functional Account contradicts with the existence of the Verb Final construction.

- (3) H-A-R-O-L-D FLOOR SWEEP-WITH-BROOM  
'Harold swept up the floor (using a broom)' (Chen 1998)

The other analysis that Fischer and Janis presented was the Movement account. The verb moves to Agr (head-initial) and then to Asp (head-final) to license a potentially stranded Aspect morpheme. A trace of the verb is phonetically realized as a resumptive verb. This analysis is developed in the analysis of the Aspectual Sandwich in Matsuoka (1997).

However, as noted earlier, the Lexical Sandwich sharply contrasts with the Aspectual Sandwich, in that it contains a grammatical object and location/instrument. Those multiple internal arguments in the Lexical Sandwich makes its thematic structure similar to that of the Dative Complement and the Double Object constructions in English (Larson 1988) such as (4) and (5), below.

- (4) John sent a letter to Mary.

(5) John sent Mary a letter.

The current analysis is proposed to capture this similarity.

### 3. Assumptions

The following assumptions are introduced in the analysis of the Lexical Sandwich.

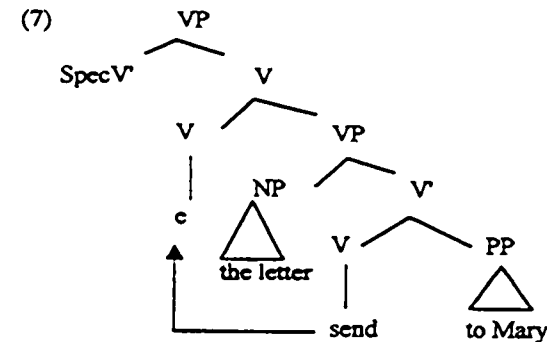
First, following the original analysis in Fischer and Janis (1992), we assume that the instrumental and the locative in ASL are realized as bound morphemes (affixes) on the verb, which may be realized in the form of classifiers. Instrumentals realized as bound morphemes are observed in spoken languages such as Nahautl (Baker 1988:79, cited from Merlan 1976.)

(6) Ya'ki-kočillo-tete'ki panci.  
He 3sS/3sO-knife-cut bread  
'He cut the bread with it (the knife).'

(Baker 1988)

Some other types of classifiers, such as the handshape classifier (e.g. [cl:B]), are also assumed to be affixal, even though they are not clearly associated with thematic roles. ASL verbs are assumed to be selected with the feature [affixal-classifier(cl)]. This feature is checked when the classifier is attached to the verb. A verb can have one basic [affixal-cl] feature as a default. When additional instrumental or locative morphemes are chosen as an obligatory argument of the verb (Fischer and Janis 1992:9), the verb is selected with an extra set of the [affixal-cl] features.

The Larsonian shell (Larson 1988), as shown in (7), is assumed in the current study. One of the major characteristics of this structure is the layered VP, projected by the lexical V head and the null V head. This structure is widely assumed in recent syntactic studies such as Chomsky (1995.) In this strictly binary branching structure, each V head supports one internal argument (*the letter* and *Mary*.) The lexical verb is overtly raised to the null V head, as indicated by the arrow in the diagram. This movement was motivated by Case and agreement requirements (Larson 1988: 343.)



Finally, I assume the copy theory of movement (Chomsky 1995). The existence of the Verb Sandwich constructions strongly indicates that the deletion of copied items in its original position can be optional in ASL (Matsuoka 1997).

### 4. Derivation of the Lexical Sandwich

A representative example of the Lexical Sandwich is repeated in (8), below.

(8) H-A-R-O-L-D SWEEP[shape cl:B] FLOOR USE-BROOM-AROUND[handle cl:S-on-S: plural location]  
'Harold sweeps up the floor (with a broom)'

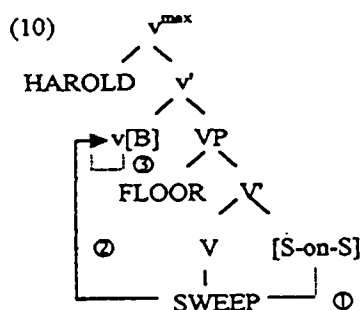
(Fischer and Janis 1992)

In this example, two verbs SWEEP and USE-BROOM-AROUND are signed with the same movement, even though they are signed with different handshapes (classifiers). The classifier [S-on-S] signifies that the sweeping was done with a broom. The form of the verb SWEEP[cl:B] is the basic form. Hence, the VP in (8) can be transcribed as the following (plural location not included for clarity of the argument.):

(9) SWEEP[cl:B] FLOOR SWEEP[cl:S-on-S]

Note that the final verb does not carry both handshapes (either as a handshape sequence or mixed form such as S-on-B, etc.) This implies that the base form of the verb does not have any classifier associated with it.

The Lexical Verb Sandwich, such as (8), is formed a raising operation of the V head to the light verb head. This movement occurs before Spell-out since affixes must be overtly associated with other lexical items. The derivation is summarized in the following structural description:



Each step of derivation is described in the following:

① When the verb is inserted into the numeration with the two affixal morphemes ([S-on-S] and [B]), it checks the [affixal-cl] feature of the S-on-S classifier<sup>2</sup>.

② The verb is raised to the null verb head. This overt movement is motivated by a strong [affixal-cl] feature, which guarantees proper association between the affix and its host (Chomsky 1995:138). Also, refer to the Stranded Affix Constraint in Lasnik (1981:135).

③ The verb checks the [affixal-cl] feature of the other classifier, [B]<sup>3</sup>.

Note that the affixal feature is not only formal, but also a PF feature, which guarantees the association of affixes and their hosts in the phonological component. Therefore, the deletion of the copy of the verb in the original position causes the crash at phonological level. This characteristic distinguishes the Lexical Sandwich from the Aspectual Sandwich: in the Aspectual Sandwich, the copy of the verb in the original position is optionally deleted before Spell-out.

ASL data such as (11), below, strongly suggest that the classifier in the higher position in the VP shell motivates the overt V-raising. When there is only one classifier in the numeration, the verb does not overtly raise<sup>4</sup>.

- (11) H-A-R-O-L-D FLOOR SWEEP-WITH-BROOM (Chen 1998)  
'Harold swept up the floor (using a broom)'

## 5. Conclusions and Theoretical Implications

In this paper, it is demonstrated that the Lexical Verb Sandwich is derived virtually by an operation used to derive the Dative Complement/Double Object constructions in other languages such as English. An advantage of the current approach over the one proposed in Chen (1997, 1998) is that we do not need an ASL-specific functional categories such as Manner P.

Our approach also captures the fact that unlike the Aspectual Sandwich, both verbs in the Lexical Sandwich are signed with different classifiers. Unlike clitics in Latin languages, the ASL affixal morphemes are not able to move to their host to be licensed. As a result, the verb is raised to rescue the situation. This overt raising is an instance of 'Enlightened Self-Interest' (Lasnik 1995a,b.)

The ASL data in the current study indicate that the overt movement motivated by the Enlightened Self-Interest needs to be allowed to license the hybrid features such as [affixal-cl]. The affixal features in the derivation of the Lexical Verb Sandwich need to be licensed at two different levels of representation: before Spell-out (thus motivating the overt verb movement) and after Spell-out (thus two verbs with different affixes). It is plausible that syntactic features with such hybrid status are involved in movements of lexical item to save stranded affixes in general.

## Endnotes

\*I appreciate Dave Braze, Debbie Chen, Diane Lillo-Martin, Nobuhiro Miyoshi, and participants of the ESCOL 99 for insightful comments and discussion. John Helwig provided editorial help. All errors are my own.

<sup>1</sup> This construction is discussed in Chen (1997) as the Handling Sandwich. The term, 'Handling Sandwich', though, is meant to refer to the sandwich constructions which contain instrumentals. One of her examples of the handling constructions is the following.

- (a) MOTHER FEED[cl:sliding-O] BABY FEED-WITH-SPOON  
'The mother fed her baby using a spoon.' (Chen 1997:8)

<sup>2</sup> Dave Braze (p.c.) pointed out to me that it is not necessary to assume that this feature-checking occurs at the pre-Spell-out stage. Since the verb and the affix remain adjacent throughout the derivation, it is possible that the verb in the original position licenses the [S-on-S] affix after Spell-out. I will leave the discussion open.

<sup>3</sup> The position of the classifier [B] is not clearly determined. It could either be located at the v head position or adjoined to the lower VP.

<sup>4</sup> The construction in (11) superficially resembles the Verb Final construction motivated by the aspectual head, such as (a) below. However, (a) has a different sentential structure, as it is an Aspectual Sandwich with a copy deleted in its original position. See Matsuoka (1997) for more discussion of this construction.

- (a) S-H-E † R-A-D-I-O LISTEN[asp:cont] (Matsuoka 1997)

## References

- Baker, Mark. 1988. *Incorporation*. Chicago: The University of Chicago Press.
- Chen, Deborah. 1998. Investigation of Word Order Acquisition in Early ASL. Ms. University of Connecticut.
- Chen, Deborah. 1997. Deriving SOV from SVO basic word order in ASL. Ms. University of Connecticut.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Fischer, Susan and Wynne Janis. 1992. License to derive: Resolving conflicts between syntax and morphology in ASL. Ms.
- Larson, Richard. 1988. On The Double Object Construction. *Linguistic Inquiry* 19:3. 335-391.
- Lasnik, Howard. 1981. Restricting the theory of transformations: A case study. In N. Hornstein, D. Lightfoot (eds.), *Explanations in Linguistics*. 152-173. London: Longmans [reprinted in Lasnik, 1990.]
- Lasnik, Howard. 1990. *Essays on restrictiveness and learnability*. Dordrecht: Kluwer.
- Lasnik, Howard. 1995a. Case and expletives revisited: On greed and other human failings. *Linguistic Inquiry* 26, 615-633.
- Lasnik, Howard. 1995b. Last resort. In S. Haraguchi, M. Funaki (eds.) *Minimalism and linguistic theory*, 1-32. Tokyo: Hitsuji Shobo.
- Matsuoka, Kazumi. 1995. Overt Verb Raising in ASL. Ms. University of Connecticut.
- Matsuoka, Kazumi. 1997. Verb Raising in American Sign Language. *Lingua* 103, 127-149.

## Nominative Objects and Overt A-Movement in Japanese

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## 1. Introduction

As early as Chomsky (1965), it was already noted that the notions of 'subject' and 'object' are not necessary in the theory of grammar, rather these notions are structurally determined. However, Kuroda (1965) has noticed that the object NP in Japanese can have nominative Case under certain environments, as in (1). The examples show that it is not the case that only the subject NP can have nominative Case in Japanese<sup>1</sup>.

- (1) Boku-ga      biiru-o/-ga      nomi-ta-i      (koto)  
 I-Nom          beer-Acc/-Nom    drink-want-pres    fact  
 'I want to drink the beer.'

But many questions arise: Is the nominative Case arbitrarily assigned to the NPs? If not, are there some structural relations for the nominative Case marker? Further, how the nominative Case is assigned to the NPs? So far, it has remained unclear how the nominative Case in Japanese is assigned or checked and whether the overt movement operation is responsible for Case checking.

In this paper, I would like to try to answer these questions, by observing Nominative object construction in Japanese such as in (1). Specifically I will suggest that the whole category of the Nominative object moves to Spec of TP in overt syntax, which means that there is a correlation of the Case marker and the structural position in Japanese.

The organization of this paper is as follows: In section 2, I will present the properties of the data, which I will call *tai*-construction in Japanese. In section 3, I will review Takezawa's (1987) approach to the Nominative object construction and point out the problems of his analysis. An alternative analysis will be provided in section 4. In section 5, the evidence to support my proposal will be presented. In section 6, I will conclude the paper and discuss the theoretical consequences of the proposed analysis.

2. Properties of *tai*-Construction

I will first present the properties of *tai*-construction, which I crucially make use of in my data. The suffix *tai*, which expresses the meaning of 'want' in English, has some special properties<sup>2</sup>. First, the suffix *tai* can attach to verbs, but not adjectives. In (2a), *tai* is connected to the verb *nomi*, which is acceptable, while in (2b), the suffix attaches to the adjective *naga*, causing ungrammaticality.

- (2) a. Boku-ga      biiru-ga      nomi-ta-i      (koto)