

# UNDERSTANDING CONJUNCTIONS<sup>1</sup>

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**Abstract** There is a long tradition in the linguistics literature of function words being historically derived from content words. This study examines one such evolution, concerning the ASL sign *UNDERSTAND*. This sign, with concomitant phonological, semantic, and syntactic shifts, results in the conjunction we call *UNDERSTAND'*. *UNDERSTAND'* is used to introduce qualifying adverbial clauses; it means, loosely, 'with the understanding that'. We show the nature of the shifts that occur in this derivation, and relate them to parallel ASL derivations. For example, the signs *FINISH*, *WRONG*, and *SUPPOSE* all have related derived conjunctions. We examine similar verbs in ASL such as *INFORM* and *WARN*, and show that they have not undergone these shifts; hence this process is not automatic. We discuss similar examples in spoken languages such as French and Niger-Congo, of function words being historically derived from content words. Finally, we propose tests for determining whether such conjunctions are co-ordinating or subordinating, and conclude that *UNDERSTAND'* is a subordinating conjunction.

## Introduction

In the course of investigating a variety of structures in American Sign Language (ASL), we happened upon a construction which we believe had not been previously discussed in the ASL literature. The construction involves the use of what looks on the surface like the verb *UNDERSTAND*, but which behaves differently from it phonologically, semantically, and syntactically. What we would like to do here is to describe what we found, and analyse it in relation to other phenomena in ASL grammar as well as to similar phenomena in other languages of the world.

Consider the sentences in Examples (1) and (2):<sup>2</sup>

(1) hn  
ME UNDERSTAND MEAN.  
'I understand what (it) means.'

(2) ^^  
ME GO-TO STORE NOW NIGHT, UNDERSTAND YOU WATCH MY CHILDREN, OK?  
'I'll go to the store tonight provided that you babysit, ok?'

In Example (1), *UNDERSTAND* is being used in its regular verbal sense. It is uninflected, so there is only one movement to the sign. It takes a subject, *ME*, and has a core meaning of comprehension.

In Example (2), however, *UNDERSTAND* is being used in a very different way. Formationally, there are two shifts. First, the movement is repeated. Secondly, a special non-manual behaviour is associated with the sign, consisting of an eyebrow raise, chin thrust, lip raise, and eye widening. Semantically, as our translation suggests, the meaning of *UNDERSTAND* here is something like 'provided that'. Syntactically, *UNDERSTAND* in Example (2) does not seem to be functioning as a verb. We will call the *UNDERSTAND* used in Example (2) *UNDERSTAND'*. The notation *UNDERSTAND'* should be understood as a shorthand that includes the non-manual behaviours described above. Let us turn now to a deeper analysis of *UNDERSTAND'*.

### ***UNDERSTAND'***

When we look at further examples of *UNDERSTAND'*, we find that some signers show a slight variation in the manual portion of the sign, in that the movement is not necessarily repeated. However, the non-manual characteristics remain relatively constant across signers.

Furthermore, we find a wider semantic range, even within signers. There seem to be three distinct uses. The first, closest in meaning to the use given in Example (1), is indeed something like 'provided that'. Further examples are given in Examples (3) and (4).

(3) ME GONE EUROPE, UNDERSTAND' FLY-THERE-DIRECTLY.  
'I will go to Europe provided I can get a non-stop flight.'

(4) t rh-q  
ONE DAY ME MY HOME, ME WANT #WHAT? WALK IN CLOSET, UNDERSTAND' #ALL MINE!

'When I get my dream house, what I want most is a walk-in closet, as long as everything in it is mine, and only mine!'

The second meaning is something like 'contrary to expectation'. Examples are given in (5) and (6).

- (5) ME GO-TO GALLAUDET UNDERSTAND' ME NOT MAJOR BUSINESS.

'I'm going to Gallaudet, but not to major in business.'

(The addressee knew that the signer was majoring in business at NTID.)

- (6) ME GONE PARTY ALL-NIGHT, UNDERSTAND' NOT-YET DRINK, ME.

'I went to an all-night party, but it's not what you think — I didn't drink.'

The third meaning is a form of clarification. See Examples (7) and (8).

- (7) ME FINISH TOUCH TORONTO, UNDERSTAND' <sup>th</sup>NOT-YET  
<sub>mm</sub> <sub>th</sub>

SIGHT-SEE-LEISURELY##, ME NOT-YET.

'I've been to Toronto, though I haven't had a chance to really see it.'

- (8) BEFORE, CAN FIND CHICKEN CHEAP, BUT NOW ME CAN'T FIND,  
<sub>t</sub>

UNDERSTAND' D-R-U-M-S-T-I-C-K THAT CHEAP, BUT ME WANT ALIKE BREAST O-R THIGH, THAT.

'I used to be able to find inexpensive chicken, but now I can't; oh, I can get drumsticks cheap, but I want things like breasts or thighs.'

Clearly, there is a semantic core in common, coming from something like 'I want you to understand'. However, even though that is the core meaning, the arguments 'I' and 'you' *cannot* be overtly expressed in the syntax. So, for example, Example (9) is ungrammatical with an explicit subject for *UNDERSTAND'*.

- (9) YOU CAN BORROW MY CAR, (\*YOU) UNDERSTAND' MUST PUT-GAS SELF.

'You can borrow my car, provided you gas it up yourself.'

*UNDERSTAND'* occurs between clauses, and seems to be introducing an adjunct clause. We also note that in these sentences, *UNDERSTAND'* cannot take a modal, as shown in Example (10).

- (10) YOU CAN BORROW MY CAR, (\*MUST) UNDERSTAND' PUT-GAS SELF.

'You can borrow my car. provided you gas it up yourself.'

These facts lead us to conclude that *UNDERSTAND'* is functioning as some kind of conjunction. We would like to suggest that *UNDERSTAND'* is yet

another example of a phenomenon that has been discussed extensively in the linguistics literature, namely of a function word being derived from a content word. In particular, we are suggesting that *UNDERSTAND'* is derived historically from a verb, but has mutated into a conjunction. We will first discuss similar examples from ASL and then turn to parallel examples from spoken languages.

### Other examples in ASL

There are well-known examples in ASL of function words derived from content words. For example, there is an adverbial conjunction *FINISH'* derived from the verb *FINISH* (Fischer & Gough, 1972), as shown in Example (11). When *FINISH'* is used as an adverbial conjunction, both the entire preceding clause and *FINISH'* itself have associated distinctive non-manual behaviours. The non-manual behaviours associated with *FINISH'* include eye-widening, head tilt, and a pause. Furthermore, the manual portion of *FINISH'* differs from that of *FINISH* in that the movement is made more sharply and with a long final hold. Note that neither the non-manual behaviours nor the change in formation for *FINISH* and *FINISH'* is analogous to the change from *UNDERSTAND* to *UNDERSTAND'*.

- (11) br 'finish'  
 YOU EAT *FINISH'*, WE-TWO GO SHOPPING.  
 'After you eat, we will go shopping.'

It has also been remarked that *WRONG* has a variety of functions, including a conjunction with adverbial content (meaning something like 'but unexpectedly'). But in fact just as with *UNDERSTAND'* and *FINISH'*, the *WRONG* that functions as a predicate is phonologically and syntactically distinct from the *WRONG'* that functions as a conjunction.<sup>3</sup> Phonologically, *WRONG'* differs from *WRONG* in two ways: manually, *WRONG'* is signed with a slightly sharper movement; non-manually, *WRONG'* is accompanied by tense lips and a raising and straightening out of the body. Again, these changes are idiosyncratic; they differ from the changes involved in deriving *UNDERSTAND'* or *FINISH'*. Syntactically, *WRONG'*, like *UNDERSTAND'*, cannot take subjects or modals. (See Example (12).)

- (12) STUDENT TYPE HER T-E-R-M PAPER TYPE,<sup>[asp:cont]</sup>  
'wrong'  
 (\*SHE) (\*CAN) *WRONG'* ROOMMATE BOTHER-HER . . .  
 'A student is typing her term paper, but her roommate pesters her . . .'

Other verb-conjunction pairs that pattern similarly to *WRONG-WRONG'*, including having distinctive non-manual behaviours, are for example, *SUCCEED-SUCCEED'* and *HAPPEN-HAPPEN'*. Here again, the phonological and semantic changes are idiosyncratic, although the syntactic shifts that occur are similar.

We thus see that when content words change to function words in ASL, there is generally an associated phonological change, including a characteristic non-

manual behaviour, as well as a loss of syntactic privileges of occurrence. The derivation of *UNDERSTAND'* from *UNDERSTAND* can be seen in this context as part of a systematic process. This process, while derivational in character, does *not* regularly apply across a number of forms. This kind of systematic process of deriving function words from content words is also found in spoken languages, as we shall now show.

### Examples in other languages

One of the ways in which languages change is that splits or shifts can occur so that a word or class of words changes categories; Bybee (1985) as well as numerous classical scholars have shown that free functor morphemes become bound morphemes, for example. It has been argued that the Proto-Indo-European person agreement inflections started out as free personal pronouns which became cliticised and eventually ended up as bound inflections.

It has also been suggested that functors can sometimes be derived from content words. For example, Li & Thompson (1973) argue for a lexical reanalysis in the history of Mandarin in which verbs become prepositional case-markers, and Givón (1975) argues for a similar process in Niger-Congo, as in Example (13):

#### (13) (Yoruba)

mo bá o mú iwé wà ilé.

I benefited you take book come house.

'I brought a book home for you.'

Many conjunctions, particularly complex conjunctions, are transparently derived from related verbs. For example, in French, many conjunctions consist of a past participle or contentful prepositional phrase, followed by a complementiser, as in Example (14); indeed, as the translations indicate, some of these conjunctions have complex counterparts in English:

- |                         |                         |                         |                  |
|-------------------------|-------------------------|-------------------------|------------------|
| (14) <i>pourvu que,</i> | <i>à condition que,</i> | <i>à moins que,</i>     | <i>afin que,</i> |
| provided that,          | on condition that,      | unless,                 | in order that,   |
| <i>attendu que,</i>     | <i>vu que,</i>          | <i>étant donné que,</i> |                  |
| given that,             | seeing as,              | given that,             |                  |

These complex conjunctions no longer function as verbs or nouns; they take sentential complements, but they cannot take subjects. Those derived from verbs cannot take modals. They are unambiguously functioning as conjunctions that now happen to coexist with phonologically and semantically related content words.<sup>4</sup>

Lord (1976) shows that a similar process occurred in a large number of languages. For example, in what have been called the Kwa languages of Niger-Congo, verbs meaning 'say' have evolved into sentential complementisers. In fact, in some languages this change has occurred at two different stages of development (with different words for 'say'), so that in some sentences there will be as many as *three* apparent verbs 'say' of which only one is functioning as a main

verb, the other two of which function as a single complementiser unit, as in Example (15):

(15) (Yoruba)

ó so wí-kpé adé lo.

he say (say-say) Ade go.

'He said that Ade went.'

In discussing similar processes within current syntactic theory, Campbell (1989) suggests that what happens is that historically a lexical item can lose its categorial selection privileges, its ability to assign a theta-grid (select thematic roles), or both. These studies on historical change suggest that the process of deriving function words from content words can take place over a long period of time. If this is true, and if individual lexical items are the leaders in the change, then we might expect to see different lexical items at different stages of development. We will next discuss evidence for this in ASL.

#### Parallel verbs without corresponding conjunctions

As we saw above, *WRONG'* has changed dramatically, semantically as well as syntactically; when used as a conjunction, *WRONG'* need not carry adversative meaning. Although *UNDERSTAND'* has changed syntactically, as we have shown, its core meaning is still related to the verb *UNDERSTAND* fairly transparently. We could thus say that *WRONG'* has progressed further from its source than *UNDERSTAND'*, which is probably still very much in the process of developing. This would account for some idiosyncrasies in signers' use of the range of meanings. What about the other end of the scale?

In explaining the meaning of *UNDERSTAND'*, one of our consultants explicitly mentioned its meaning and use parallel to two verbs, *WARN* and *INFORM*. They have somewhat similar meanings to *UNDERSTAND'*, and are used in similar pragmatic contexts. Some examples of native signers' spontaneous productions using these verbs are given in Examples (16) and (17):

(16) YOU CAN BORROW MY CAR, BUT WE MUST WARN YOU ALL-GONE GAS.

'You can borrow my car, but I must warn you that there's no gas in it.'

(17) MOTHER TELL-ME CAN GONE MOVIE, BUT SHE INFORM-ME THERE CROWDED.

'Mom said I could go to the movies, but she told me it would be crowded there.'

Notice the differences between *WARN* and *INFORM* versus *UNDERSTAND'*: *WARN* and *INFORM* can take both subjects and modals, whereas *UNDERSTAND'* cannot. Furthermore, *UNDERSTAND'* seems to be signer-

oriented, in that it expresses the attitude of the signer, and can be used in a third-person context only in direct quotation. See Example (18):

- (18) \*?MOTHER TELL-ME CAN BORROW CAR, UNDERSTAND' ME  
MUST PUT-GAS.

As shown in Example (17), this is not true for *INFORM*, or indeed for *WARN*. Thus, whereas *UNDERSTAND'* has undergone the syntactic changes to become a conjunction, *WARN* and *INFORM*, despite their pragmatic similarities, have not made that transition. The process we have observed in deriving *UNDERSTAND'* from *UNDERSTAND* could well apply in the future to verbs such as *WARN* and *INFORM*. However, given the idiosyncratic phonological relationships found in the pairs we have already discussed, we would not want to predict the phonological modifications that such verbs would undergo.

### What kind of conjunction?

We have been sidestepping the issue of whether *UNDERSTAND'* is a coordinating or subordinating conjunction. The intuitions of native signers as well as our own are that the clauses introduced by *UNDERSTAND'* are adverbial *subordinate* clauses.<sup>5</sup> We investigated a number of syntactic tests in an attempt to resolve this issue. Although one of the tests was inconclusive, two others supported our hypothesis that *UNDERSTAND'* introduces a subordinate clause.

The first test we tried involves the order between subordinate and main clauses. Many types of subordinate clauses can either precede or follow their main clauses. This is illustrated in Examples (19) and (20), both of which are acceptable, though in fact Example (19) is more frequent.<sup>6</sup>

- (19) SUPPOSE' YOU PUT-GAS, ME ACCEDE LOAN-YOU CAR.

'If you put gas (in the car), I'll agree to loan (it) to you.'

- (20) ME ACCEDE LOAN-YOU CAR, SUPPOSE' YOU PUT-GAS.

Unlike clauses introduced by *SUPPOSE'*, however, clauses beginning with *UNDERSTAND'* may not occur at the beginning of the sentence:

- (21) \*UNDERSTAND' MUST PUT-GAS SELF, YOU CAN BORROW MY CAR.

The fact that *UNDERSTAND'* is more restricted in its occurrence than *SUPPOSE'* does not preclude the possibility that *UNDERSTAND'* is a subordinating conjunction. There are other subordinating conjunctions in ASL that do not permit clausal reordering, as illustrated in Examples (22) to (24).

- (22)                    t                                                       rh-q  
COOKIES, ME GOBBLE-UP, WHY ME HUNGRY, ME.

'As for the cookies, the reason I scarfed them down was that I was hungry.'

- (23) \*ME HUNGRY ME, ME GOBBLE-UP COOKIES rh-q WHY.
- (24) rh-q  
\*WHY ME HUNGRY, ME, GOBBLE-UP COOKIES.

Thus this test cannot tell us whether *UNDERSTAND'* is a subordinating or co-ordinating conjunction.

A grammarian's test for subordinate versus co-ordinate clauses is whether the clause can stand alone. The intuition of native signers is that clauses introduced by *UNDERSTAND'* are incomplete. For example, if Example (25) opens a discourse, it is unacceptable, and if it occurs within a discourse, it is understood as a continuation, much like Examples (26) or (27):

- (25) ?*UNDERSTAND'* MUST PUT-GAS SELF
- (26) Because I'm pooped.
- (27) Tukaretyatta kara (Japanese)  
tired out because  
'because I'm pooped'.

A final syntactic test seems to differentiate strongly between co-ordinate and subordinate conjunction: the ability to undergo one kind of conjunction reduction. In ASL, this kind of conjunction reduction is permitted in co-ordinate structures, as illustrated in Examples (28) and (29):

- (28) ME ADORE CHOCOLATE, ALWAYS GOBBLE-UP e.<sup>7</sup>  
'I love chocolate, and always scarf it down.'
- (29) ME ADORE CHOCOLATE, BUT ALLERGIC e.  
'I love chocolate, but I'm allergic to it.'

In this construction, the covert object in the second conjunct is understood to be coreferential with the overt object in the first conjunct. This reduction process is not possible in subordinate clauses. Rather, an overt pronoun or lexical NP is required in the object position.<sup>8</sup> Compare Example (30) with (31), and Example (32) with (33).

- (30) \**SUPPOSE'* SEE CHOCOLATE, ME GOBBLE-UP e.
- (31) *SUPPOSE'* SEE CHOCOLATE, ME GOBBLE-UP INDEX.  
'Whenever I see chocolate, I eat it.'
- (32) \*ME ADORE CHOCOLATE, EVEN-THOUGH ALLERGIC.
- (33) ME ADORE CHOCOLATE, EVEN-THOUGH ALLERGIC INDEX  
(CHOCOLATE).  
'I love chocolate, although I'm allergic to it.'



In Examples (31) and (33), the overt pronoun makes the sentence grammatical, in contrast to Examples (30) and (32), which are ungrammatical due to the absence of the pronoun.

Recall that the co-ordinate structure in Example (29) is grammatical. If we substitute *UNDERSTAND'* for *BUT*, we obtain Example (34):

(34) \*ME ADORE CHOCOLATE, UNDERSTAND' ALLERGIC e.

As in the cases in Examples (30) to (33), Example (34) can be saved by introducing an overt pronoun or a lexical NP, as in Example (35):

(35) ME ADORE CHOCOLATE, UNDERSTAND' ALLERGIC INDEX (CHOCOLATE).

'I love chocolate, although I'm allergic to it.'

We believe, therefore, that evidence comes down on the side of *UNDERSTAND'* being a subordinating conjunction, introducing a qualifying adverbial clause.

## Conclusion

ASL, a young and rapidly developing language, provides a natural laboratory for studying the processes by which some function words develop from content words. We have found several verbs in ASL such as *WRONG*, *SUPPOSE*, and *UNDERSTAND*, that have morphologically related alternates that function as conjunctions introducing an adjunct clause; additionally, we have shown examples of this process in a variety of spoken languages. We have further demonstrated that apparently similar predicates in ASL have not yet undergone this process.

The derivation of function from content words is clearly something that happens in many if not most of the languages of the world. What is exciting about studying this process in ASL is the ability to see it happening before our eyes.

## Notes

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2. We use the following conventions for representing ASL: signs are glossed in capital letters. If a single sign requires a gloss of several English words, those words are connected by hyphens in the gloss. Fingerspelled words are represented with hyphens between individual letters. Fingerspelled loan signs are indicated by a '#' preceding the gloss. A line above a sign or sign sequence indicates the scope of the facial expression or other non-manual behaviour indicated above the line. For the sake of this paper, abbreviations include:

hn	head nod
br	brow raise
t	topic marker, consisting of raised eyebrows and chin tuck
rh-q	so-called 'rhetorical question': cocked head, raised eyebrows, widened eyes
th	tongue thrust
mm	'with pleasure': lips together, thrust loosely
^ ^	description in text

3. In fact there is another conjunction, *WRONG''*, which may function as some kind of co-ordinating conjunction for some signers (*WRONG-TWIST*), meaning 'and then', without any adversative meaning.
4. It isn't only conjunctions that can make the transition from content word to function word. Complex prepositions in many languages can also be derived from content words; for example, *in spite of* or *on top of* in English and *no shita ni* and *no ue ni* in Japanese. We are grateful to Morris Halle for pointing this out to us.
5. *UNDERSTAND'* can co-occur with *BUT*, suggesting that it might be some form of co-ordinating conjunction insofar as *BUT* itself is a co-ordinating conjunction. However, the order of *BUT* and *UNDERSTAND'* is fixed, and the two cannot be separated by any other sign. This leads us to suspect that *BUT+UNDERSTAND'* functions as a complex unit, reminiscent of the complex complementisers discussed by Lord (1976). Native signers have told us that their intuitions are that *BUT+UNDERSTAND'* function together as a subordinator.
6. We are assuming, as seems plausible based on semantics and distributional facts, that *SUPPOSE'* ('if') is a subordinating conjunction. Interestingly, *SUPPOSE'*, which introduces conditional clauses, is itself derived from the content word *SUPPOSE*, with concomitant phonological changes, such as eye widening and eyebrow raising.
7. 'e' in this and subsequent examples represents the neutral representation of an empty category. For the present we are uncommitted to whether this empty category is empty in underlying structure, is moved, or is deleted.
8. The overt pronoun is required with non-agreeing verbs, as in the examples given. However, since agreeing verbs license a null pronoun (Lillo-Martin, 1985), the object can be empty in the case of such verbs.

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