Two LE's and a Negator: the interaction between aspectual particles and negation in Mandarin

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Syntax

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There exists a distinction between the meaning and syntactic distribution of the post-verbal and sentence-final forms of LE, with the former being in contrastive distribution with the general negator BU and instead requiring a periphrastic MEI-YOU construction. It is argued in this paper that this is evidence of the two LE's being separate homophonous particles, the post-verbal LE being a spell out of some aspectual head above vP that requires the raising of the verb to its specifier. In negative contexts, the overt negative element, which is base-generated inside vP, is instead raised and the aspectual head is pronounced as YOU. This derives the surface word order and provides evidence for the kind of purely-semantic negation espoused in Zeijlstra (2004).

1. **Introduction**

In Mandarin Chinese, there is a difference in the meaning of the particle LE based upon whether it is being used as a verbal or sentence-final particle. The former has a perfective or telic reading while the latter gives a change of state reading (Sybesma 1999). And because the only way to distinguish them is the presence of additional lexical material after the verbal complement (e.g. a time expression), the following sentence is ambiguous:

1) Xia yu le
   Down rain LE
   "It rained (and has now stopped)" OR
   "It has begun to rain (and it wasn't before)"

LE can occur with these two distinct meanings in the same sentence as in (2). But most importantly, they behave very differently in how they interact with negation. The sentence final particle is negated by the simple addition of the general negative element BU (3a), while the verbal-LE requires the merger of the existential verb YOU, which can then host its lexically specified negative element MEI[1]. Of particular interest is that in the latter construction (3b, below) LE must obligatorily be absent from the string, cf. (3c)[2].

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1 While MEI is technically capable of occurring by itself, it is always understood to be negating an un-pronounced YOU, and YOU is forced to re-appear in A-not-A questions with MEI-YOU. I assume this to be a PF process motivated by its re-emergence in A-not-A questions, as below. As a PF process, it is beyond the scope of the syntax and thus this paper as well.

i.	Ni	you	mei	*(you)	chi	fan?
	You	YOU	MEI	YOU	eat	food?

2 The linear string itself is not ungrammatical, as we shall see later, but this sentence is impossible with the meaning of post-verbal LE.

2) Wo xue zhongwen le liang-nian le
I study Chinese LE two-year LE
"I had been studying Chinese for two years"

3) a. Bu xia yu le
BU down rain CS
"It has not begun to rain."

b. Mei you xia yu
MEI YOU down rain
"It didn't rain"

c.*Mei you xia yu le
MEIYOU down rain PERF
"It didn't rain."

In light of these facts, many scholars have argued that these two types of LE are separate phenomena and should be treated differently syntactically (Chao 1968, Li and Thompson 1981, Sybesma 1999). Although there is some disagreement in how this should be represented structurally, with many of the accounts being largely out of date and making appeals to elements of syntactic theory that are no longer considered viable (e.g. an appeal to syntactic levels of representation such as Deep Structure). In the next section, I give a broad overview of the phenomenon in question, and discuss whether it is best explained via a single morpheme or an approach with two homophonous morphemes. Following that, I go into detail about the structure of the post-verbal LE and show how and why prior methods of accounting for its distribution are wanting. I then propose my own competing account and motivate it, before discussing ramifications and assumptions that have been used, after which I conclude.

In brief, it is my argument that the two instances of LE are syntactically distinct, with sentence-LE being largely beyond the scope of this paper. Verb-LE is meanwhile argued to be one allomorph of an aspectual morpheme to the left of vP: in affirmative constructions, the VP raises to the specifier of this projection, the head of which is then spelled out as LE; in contrast, in negative sentences, the negative phrase blocks movement by its presence in the specifier of this aspectual projection, which is then spelled out as YOU and negation spelled out as the lexically specified allomorph of negation MEI.

2. Overview: One LE or Two?

As noted in the preceding section, there is a distinct difference between the two LE's, which has led many scholars to conclude that they must be separate particles based on purely semantic grounds (Chao 1968, Li and Thompson 1981, Sybesma 1999). They argue that combining them under the same umbrella would be to lose a critical distinction between the two forms, in that verb-LE signals, "perfectivity, that is, it indicates that an event is being viewed in its entirety" (Li and Thompson 1981: 185), while sentence-LE indicates "inchoativity" (Chao 1968: 798).

However, P. Li (1990) takes the opposite perspective and argues that both kinds of LE at some underlying level are markers of change, and that the larger difference is due to verb-LE giving a bounding type of change over just a VP, while sentence-LE has properties of more general change, sometimes objective but often subjective, and scopes over the entire sentence. There is the general idea that things were different just a moment before, or that some process

has just begun, he argues. We can see this in (4a-d) below (slightly modified from Sybesma 1999's 4a-d, page 60; translations his).

(4) a. Wo mingbai nei-jian shi le
I understand that-CL thing LE
"Now I understand it."

b. Ta you liang-ge haizi le
He has 2-CL child LE
"He has two children now."

c. Wo mai nei-ben shu le
I buy that-CL book LE
"I have bought that book now."

d. Wo bu xiang mai nei-ben shu le
I BU want buy that-CL book LE
"I don't want to buy that book anymore."

However, Sybesma (1999) critically notes that given the correct contexts, there is still ambiguity in the sentences: a simple difference in scope should not give this; if the only difference between sentence-LE and verb-LE is the size of the event being bounded, from where is the additional meaning of "now" coming? If anything, sentence-LE is here behaving in the opposite way from verb-LE, and seems to be marking something like inchoativity or realis.

In these constructions, there is an ambiguity in regards to exactly what the prior state of affairs was that has now changed and given us the current setting. Looking at (5) below (Sybesma's (6), page 62), we see that, depending on who one is addressing and when, the readings change. Were one to recount a book-buying event that was relevant to the discussion

with a friend, the former reading would be preferred. However, were one informing a shopkeeper about one's decision on a purchase, the latter would be more salient.

(5)

Wo	mai	zhei-ben	shu	le
I	buy	this-CL	book	LE

"I bought this book" OR

"I'll buy this book."

It is difficult for a theory with only one LE to account for this: if one is attempting to account for the difference between sentence-LE and verb-LE by saying they are fundamentally the same, but being spelled out in different places in the string leads to differences in meaning because of some nebulous appeal to scope, then there should not be syntactic ambiguity between different instances of sentence-LE. Were one to try to reconcile these facts with a scopal account, one would need to postulate multiple distinct positions for sentence-LE to occupy that cannot be differentiated in the surface string, cannot have any overt material occupying them except for sentence-LE, and, for purely stipulative reasons, would give rise to semantics in direct opposition depending on non-salient differences in position. While this is possible, it is certainly not probable and puts undue stress on Universal Grammar and learnability to postulate, and should not be considered the null-hypothesis.

However, on an account based upon the idea that sentence-final LE signals an objective or subjective change of state, rather than the binding of an event, this falls out naturally. In the

former reading, what has changed is the state of having or not having a book. In the latter, what has changed is the subjective decision about whether or not to purchase a particular book[3].

Most importantly and most relevant to the discussion at hand, is how LE (or the two LE's) behave syntactically, which is something that the single-LE approach has great difficulty with. Even if one were to attempt the scopal account sketched above, it would be difficult and likely fruitless to try account for the same particle being negated in an entirely different way by simple virtue of having undergone movement.

Returning to the negative sentence (4d) we see that the general negative marker BU has been merged. It simply negates the sentence and sentence-final LE remains in place, continuing to give its semantics of change of state. However, when we compare it to its verb-LE counterparts (5a-b) below, we have highly different behavior. In (5a), where we have just added in BU, the sentence is entirely ungrammatical. To form its grammatical counterpart (5b), we must add the existential verb YOU (which literally means "to exist" or "to have"), which can then be negated by its lexically specified negator MEI. In addition, LE must be absent.

(5) a) *Wo bu mai-le nei-ben shu
I BU buy LE that-CL book

b) Wo mei you mai nei-ben shu
I MEI YOU buy that-CL book
"I didn't buy that book."

3 Note that I am following (Sybesma 1999) when I refer to this "change of state" semantics, and it is not be confused with how it is more generally used in the semantics literature.

It has been argued that the MEI YOU construction is likewise incompatible with sentence-LE (P. Li 1990), but I follow Sybesma in disagreeing. He notes that verb-LE is the only one incompatible with MEI-YOU, and that in actuality/subjective change of state contexts, sentence-LE and the MEI-YOU construction can freely co-occur. See sentences (6a-c) below (slightly modified from Sybesma 1999's 9a-c, page 64).

(6) a. Li Si lianxu liang-nian mei-you wanchen renwu le
Li Si successive two-year MEI YOU fulfill task LE
"Li Si hasn't accomplished his task for two years in a row now."

b. Ta yijing san-tian mei-you chi fan le
He already three-day MEI YOU eat food LE
"He did not eat for three days already."

c. Ta mei-you he jiu le
He MEI YOU drink liquor LE
"[You may be surprised to hear but] he has not had any alcohol."

In these sentences, it is clear that the MEI-YOU construction is bearing negation over the sentence, but sentence-LE is still capable of occurring at the end of the sentence and giving its change of state/actuality semantics: it is, for whatever reason, outside the scope of negation. If anything, the MEI-YOU construction is negating an underlying perfective reading

Looking at further elaborations of (4c), we have a clearer picture of what is going on here. (4c) remains the same with the same meaning, but there are also its cousin-sentences (4c′) and (4c″). (4c′) would be the more standard, less marked way of phrasing that there was a prior

book-buying event, using verb-LE. (4c″), meanwhile, contains both verb-LE and sentence-LE, with verb-LE giving its usual perfective semantics and sentence-LE providing a subjective change of state meaning, most often available if one were directly contradicting a prior statement (e.g. someone had just said that you had not purchased the book in question and you were disagreeing).

(4) c. Wo mai nei-ben shu le
I buy that-CL book LE
"I have bought that book now."

c′. Wo mai-le nei-ben shu
I buy-LE that-CL book
"I bought that book."

c″. Wo mai-le nei-ben shu le
I buy-LE that-CL book LE
"I bought that book now." OR
"I DID buy that book." (With an emphatic meaning)

(4c″) is transparently the affirmative equivalent of sentences like (6a-c) syntactically : the only problem is that negating verb-LE and leaving sentence-LE has very strange semantics, which must be given highly specific contexts to be judged acceptable, a context very difficult to give to an event of book-buying, but available in environments like (6a-c). If we look at (4c‴), we have the same lexical array as in (4c-c″), but we have negated verb-LE and merged MEI-YOU. This sentence is very strange, as it has not been given the proper context as in the

examples in (6): however, were there ever to be such a context, the examples in (6) show us that this is how one would have to express it.

(4)	c‴.%Wo	mei-you	mai	nei-ben	shu	le
	I	MEI-YOU	buy	that-CL	book	LE

In this section, I have argued that we are not dealing with two manifestations of a single particle, but, instead, that we should analyze the differences between sentence-LE and verb-LE as completely separate particles that so happen to have the same overt pronunciation. I have motivated this firstly on semantic and general theoretic grounds, but most crucially with an appeal to their negated forms. The fact that they negate so differently, despite being able to occur in the same sentence, shows that we must be dealing with two distinct phenomena.

Sentence-LE is largely beyond the scope of the remainder of this paper: it was primarily mentioned to distinguish it from verb-LE and to demonstrate that we are not dealing with the same phenomenon. However, I will go so far as to say that, considering its distribution as radically sentence final (except when used with the even more radically sentence-final question particle MA) and its apparently very wide scope, I would argue that it should be treated in a similar way to how others have approached other sentence-final particles such as the question particle MA: that it is some functional projection merged very late in the derivation, with possibly the rest of the sentence raising to its specifier as in Kayne (1994).

In the next section, I will go into detail in regards to the distribution of verb-LE: specifically, on how it interacts with negation. I shall discuss the various accounts that have been proposed in the literature to date, and explain why they are less than ideal explanations.

3. **Post-verbal LE**

As was demonstrated in the previous section, verb-LE and the periphrastic negative construction MEI-YOU show a contrastive distribution: if one desires to negate a sentence containing post-verbal LE, it must be absent from the string and MEI-YOU must be present. The only verbs that are unable to combine with verb-LE, stative verbs, are likewise incompatible with MEI-YOU. Considering these facts, the most obvious account for this is that LE and MEI-YOU are somehow directly related at some deeper level of abstraction.

3.1 Prior Accounts

3.1.1 Wang (1965)

That post-verbal LE and MEI-YOU are directly related is hardly a new proposition. Wang (1965) noted this alternation and proposed an early syntactic account for it via a rule of affix-hopping: there is always a YOU present in a sentence with the perfective meaning, in negative contexts it remains *in situ* and is negated by MEI, but in affirmative sentences it obligatorily shifts rightward to a position following the verb (with an additional rule that changes the pronunciation). This gives a straightforward account of how LE and MEI-YOU pattern with A-not-A questions as in (7a-e) below. (Adapted from Huang 1988, page 283; 20-22).

(7) a. Tamen pian-le Li Si
They cheat-LE Li Si
"They cheated Li Si"

b. Tamen mei-you pian Li Si
They MEI-YOU cheat Li Si
"They did not cheat Li Si."

c. Tamen you-mei-you pian Li Si
They YOU-MEI-YOU cheat Li Si
"Did they cheat Li Si?"

d. *Tamen bu pian-le Li Si
They BU cheat-LE Li Si

e. *Tamen pian-bu-pian-le Li Si
They cheat-BU-cheat-LE Li Si

While this account captures the generalization about the distribution of YOU and LE, it sadly is showing its age: rightward movement is outright banned under minimalist assumptions. While it is certainly descriptively adequate, it is formally and theoretically inadequate and requires substantial remodeling to be integrated into the current syntactic framework, something that we shall return to later in section 4.3.

3.1.2 Huang (1998)

Huang (1988) attempts to capture Wang's proposal without an appeal to phrase structure rules by creating what he calls Principle P, written below as (8) (from Huang 1988, page 284 ;

his 26). He assumes that negation is locally adjoined to the verb, forming an immediate constituent with it. From this, he accounts for the inability of the verb to then host perfective morphology on semantic grounds: one cannot say that a non-existent action is complete, as this is a direct contradiction, assuming that LE scopes over negation. Likewise, he reasons, this should also ban the presence of the perfective in A-not-A questions, because, as questions, they involve some question feature present in a pre-verbal inflectional position.

(8) Principle P: The negative morpheme BU forms an immediate construction with the first V^0 element following it.

From this, he derives the distribution of YOU and MEI in A-not-A questions via the assumption that YOU occupies an inflectional position scoping over the entire VP, which can then undergo the process of question formation with its own allomorph of negation.

While this account seems initially more attractive and compatible with current research, it sadly makes several conclusions that lead to the argument falling in on itself. Huang assumes that negation is base-generated in a head-adjunction position on the head of VP: this is untenable from the beginning. Negation in Mandarin is phrasal; if we look at the *Why not?* test a la Ziejlstra (2004) it patterns like other phrasal negators e.g. English "not": "Weishenme bu?" is word for word "why not". While it might be possible to base-generate a head in a head adjunction position to another head, it is clearly not an attractive idea to do the same with a phrase.

Leaving aside that issue and assuming that negation is instead an independent phrase somewhere else in the structure whose head is able to move into this head-adjunction position,

we still have a problem. The head of the negation phrase would have to be moved onto V through head adjunction, which would be rightward movement from some functional position above vP or it would have to occur after LE has already been merged, both of which are banned on a Minimalist account. The former is crossing a phase, and while that could be possible under agreement via Phase Extension (den Dikken 2007) the C-T complex has yet to be merged, so there is nothing to agree with vP, as well as the whole process being an example of rightward movement. Meanwhile, the latter, in which negation is somewhere low in the structure, fails because, critically, we need to obtain the surface word order of the LE following the VP: there are two possible derivations: either NEG is first merged into the structure, followed by LE and then lastly the VP, or LE is the first relevant element merged into the structure and then NEG and then again the VP is merged last. In both of these derivations, however, LE is merged prior to verb, and there is no reason why we should assume that negation inherently attaches to the verb first. Furthermore, there is a successful derivation where LE associates first with the verb and is then followed by negation that would be predicted under this account. Such sentences do not exist, however, as we have seen again and again, and Huang does not provide any. If we return to (5a), reproduced below, we see that there is not some alternate reading where we are negating the perfectivity of the book buying event: the sentence is instead flat-out ungrammatical.

(5)	a)	*Wo	bu	mai-le nei-ben	shu
		I	BU	buy LEthat-CL	book

His account is also critically based on an appeal to the semantics interfering directly with the syntax, undercutting the autonomy of the syntax and putting the account on unstable

theoretical ground: while it would rule out one scope reading, that of LE scoping over negation, it does not account for the fact that negation scoping over LE is likewise predicted but not borne out. Even were we to look past this, the account does not in fact predict that sentences involving both BU and verb-LE should be ungrammatical: instead they are predicted to be merely semantically poorly formed, e.g. one would need to be discussing the perfectivity of a non-existent event. Considering that there is a semantically viable alternative scope to the linear string under this account, why do speakers not instead interpret negation as scoping over verb-LE, with the possible reading that an action was begun but not completed?

We have already seen, however, sentences that are strange in a parallel fashion semantically, but are indeed grammatical given appropriate context: that is, those sentences like (6a-c) that contain both the MEI-YOU negative perfective and actuality/change of state sentence-LE. In contrast to these, sentences with BU negating verb-LE are starkly ungrammatical, and Huang fails to provide any context in which such an utterance would be grammatical.

Finally, his appeals to some question feature[4] that blocks the presence of LE are baseless. One can certainly ask whether an action has been completed in Mandarin: either by simply forming an A-not-A structure, but with MEI instead of BU (9a.) or by using the sentence final question particle MA. Since both of these are perfectly normal, natural sentences in Mandarin, both still retaining the semantics of the perfective marker and being in fact questions specifically in regards to the perfectivity of the event, it makes no sense to postulate that verb-LE and questions are somehow incompatible.

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4 Huang actually refers to it as a [+wh] feature, but as there is no wh-word present in an A-not-A construction, I have changed it to a more general questioning feature. To assume that there is some sort of null wh-expression in the sentence weakens his account even further.

(9) a. Ni you-mei-you mai nei-ben shu?
You YOU-MEI-YOU buy that-CL book
b. Ni mai-le nei-ben shu ma?
You buy-LE that-CL book QUES.
"Did you buy that book?"

Having found the above two accounts wanting and incompatible with Minimalist syntax, in the next section, I will lay out my own proposal. First, I will make a diachronic detour to discuss the evolution of the negative elements in modern Mandarin. Then, I shall proceed to talk about general features and selectional properties of negation in Mandarin and how this should impact an analysis. Next, evidence from Taiwanese Mandarin will be used to show a deeper connection between verb-LE and YOU than has been proposed before. Finally, I will develop my own account and motivate it using all of the above.

4. **Motivations and an Account**

As shown in the previous section, the past accounts concerning the relationship between verb-LE and the MEI-YOU construction are incompatible with the Minimalist framework. Their insights, however, particularly those of Wang (1965), are not. While Wang (1965) lacked the proper framework to express it, a movement account that assumes verb-LE and YOU to be different spell outs of the same particle produces the correct generalization, and can be saved if instead of rightward movement of the particle, we have instead leftward movement of the VP.

4.1 *Negation and Verbs*

Firstly, it is worth noting the etymologies of these negative elements: both of them were originally verbs (Matthews 1943). In Classical Chinese, neither one of them was a negative element, but they eventually became such under normal diachronic processes of semantic drift and semantic bleaching, eventually displacing the original negators.

Following from this, if we assume that some part of its verbal nature remains in the modern language, we have an explanation of the wide distribution of negation, specifically, that it should allow the same selectional properties as a verb. It is possible in Mandarin to have negation at varying heights with accompanying scope differences such as in (10a-d). (10a) has two modals and a matrix verb nested inside one another, with each of them giving their appropriate semantics in the usual way. In (10b), BU has been added and takes scope over the modal of deontic necessity, negating it. (10c) is similar: again we have added BU, but this time it is above the modal of epistemic possibility, and, crucially, only scopes over that: deontic necessity is outside negation. Finally, (10d) has negation scoping over the verb alone, and again, the modals are untouched semantically.

(10) a. Zhang San bixun keyi wen Li You
Zhang San need may kiss Li You
"Zhang San needs to be allowed to kiss Li You."

b. Zhang San bu bixun keyi wen Li You
Zhang San BU need may kiss Li You
"Zhang San doesn't need to be allowed to kiss Li You."
i.e. there is nothing forcing him to be allowed

c. Zhang San bixun bu keyi wen Li You
Zhang San need BU may kiss Li You
"Zhang San needs to not be able to kiss Li You."
i.e. something must stop him from being able to

d. Zhang San bixun keyi bu wen Li You
Zhang San need may BU kiss Li You
"Zhang San needs to be able to not kiss Li You."
i.e. something must ensure his ability to not kiss her

This is entirely accounted for, if we assume that negation in Mandarin has these verbal characteristics. As a verb (or verb-like element), there is no reason why we should assume that it doesn't have its own selectional properties. And Chinese, as a serial-verb language, would certainly allow for a verb to select another verb. In fact, were it a verb, this would be precisely what we would predict considering how capable Chinese is of stringing one verb after another.

It is important to note however, that it is not necessarily the argument that negation in Mandarin is actually a true verb, as it is in language like Finnish (Sulkala 1992). Rather, it is the argument that negation in Mandarin is sufficiently analogous to verbal elements in the lexicon to allow the postulation of similar selectional properties, as well as, very critically, allowing it to end up in a feature sharing relationship with the verbal complex.

4.2 Taiwanese Mandarin

In Taiwanese Mandarin, there is not any YOU-LE alternation. Instead, there is only YOU: whenever one wants to encode perfective semantics, YOU is merged before the verb,

where it remains in both affirmative and negative contexts, taking its lexically specified negative allomorph in the latter (Sybesma 1999.). Sentence-LE remains the same in both use and pronunciation, and all other semantic and distributional facts about these constructions remain the same.

Taiwanese Mandarin is a variety of Mandarin spoken in the Republic of China that has inherited many of its features from various other varieties from around the southern part of China. While more educated speakers will use the standard forms as we have discussed so far, it is common outside of Taipei or in poorer/more rural areas to use YOU as a spell out of verb-LE. This construction is thus hardly rare and is certainly vibrant and flourishing.

This further drives home the point on the impossibility of a one-LE approach as given in the first section: it would be very difficult to account for why a dialect so closely related should have re-analyzed a fraction of the uses of a particle as a separate morpheme while keeping the syntax otherwise the same. In addition, this provides evidence that LE and YOU are not just closely related, but are in fact two different pronunciations of the same word.

4.3 The Proposal

It is my contention that YOU/LE are the two spell-outs of the same functional head that is positioned somewhere to the left of vP. While I do not think it necessarily heads its own functional projection, I shall remain agnostic as to its exact position to left of vP or what it might be cross-linguistically In addition, I take no stance on how exactly this functional projection should interact with other functional elements above vP, and leave that to further research in this area. For the purposes of the current discussion, all that matters is that there exists some head

capable of giving aspectual semantics, and that this head be to the left of the verb and be spelled out as either LE or YOU, depending on whether or not it has shared features with VP under Spec-Head Agreement. For purposes of ease of discussion, it shall henceforth be referred to as LE-P for the duration of this paper.

First, let us return briefly to the matter of sentence-LE to further illustrate that no interaction between sentence-LE and the hypothesized LE-P should be predicted. As a radically sentence-final particle, sentence-LE should be analyzed in a similar way to other wide-scope sentence final particles such as the question-particle MA in Mandarin, or the analogous question particle KA in Japanese. Due to the size of their scope over the sentence (i.e. at least an entire clause) and their required position, they should be assumed to be the spell out of the head of some functional projection above the clause, possibly in C or the left-periphery (Kayne 1994). Should this be the case, there should be no interaction with some functional head below T, via its phasal status, if not sheer distance. These predictions are borne out as we have already discussed in the previous sections.

Returning now to verb-LE, let us try to account for its distribution in regards to negation, with the help of the postulated LE-P. In affirmative contexts, when LE-P is merged, the VP moves to the specifier of LE-P where it can be given its perfective aspect. The subject is then able to be moved up to the specifier of TP[5]. The complement of the verb, often a resultative predicate (Sybesma 1999, Huang 1988), can easily be pied-piped along with VP, but it could also raise first to some higher position in the VP shell where it will be spelled out, allowing only the

5 Alternatively, it could be base generated in Spec-TP and merely agree with vP, as in (den Dikken 2012): the current work is agnostic to such larger elements of the syntax and they have only been inserted into the current work for the purposes of completeness.

V-head to be spelled out in the surface word order. This accounts for the optionality in word order on whether verb-LE is spelled out either after the verb itself or after the verb and its complement: either the complement of the verb has been moved out of the VP prior to the movement of VP into Spec-LE-P or there is some PF rule that accounts for whether or not it is spelled out in this higher position or in its base-generation site, either account of which I remain agnostic to until further information is obtained.

On the other hand, in negative sentences, I argue that NegP, as a verbal element, is instead base-generated in the highest position of a serial-verb construction, immediately below vP (as opposed to others who have postulated, on semantic grounds, that negation should be higher than at least vP, as in Zeijlstra 2004 and Haegeman and Lohndal 2010). As the verb and negation are both part of the same verbal complex, they are perfectly capable of sharing features with each other, and thus negation can raise to Spec-LE-P. Of note, this means that the overt, spelled out part of negation in Mandarin is therefore predicted to occupy the specifier of Neg-P. Although this is hardly a novel position to take (Zeijlstra 2004), this ties back in to the prior point of the distinction between negation having verb-like properties, as I have argued, and it being a full verb: in these constructions, negation has the selectional properties of a verb, but the actual Neg-P remains *in situ* and only its specifier is raised.

The allomorphy between LE and YOU on the surface is then contingent on its placement in the linear string: as a largely PF process, I will have little to say on the matter as it is beyond the scope of the syntax. However, it is entirely possible that LE, as merely a particle, is unable to host negation, and thus a periphrastic, "dummy" verb is used, analogous to some accounts of DO-insertion in English (Kroch 1989). A similar PF process would straight-forwardly account for the pronunciation of MEI instead of LE: after the so-called "dummy" verb is spelled out, the

specific negation allomorph for YOU is used under analogy to sentences that contain lexical YOU, which cannot be negated with BU.

While this account is far from perfect, most notably in it only partially being able to account for the allomorphy of both LE/YOU and BU/MEI, it has sketched and motivated at least the beginning of a more unified account for this phenomenon while staying inside of the bounds of Minimalist syntax. It is the hope that future development, most promisingly with the Distributed Morphology framework, might be able to account for this in a more detailed, principled fashion than has been given here.

In the next section, I move on to discuss theoretical and empirical implications for this account to and address problems and assumptions that have not been addressed so far.

5. **Discussion**

If I am correct in my analysis, this will have various repercussions for certain aspects of the theory of syntax. It predicts that verbs must be able to be linked directly and inside of a single verbal complex, underneath a single vP. Secondly, it provides empirical support for the ideas of Zeijlstra (2004) in regards to negation being possibly wholly semantic rather than syntactic in its nature. Finally, these two points can be combined to explain semantic and syntactic questions yet untouched.

5.1 Zeijlstra (2004)

In his 2004 dissertation on negative concord and double-negative constructions, Hedde Zeijlstra proposes the idea that in some languages, like Standard English, negation is a purely syntactic process: that is, while negative elements would obviously be present in the syntax, the process of negation itself would be a purely semantic process with these elements otherwise ignoring the need to be checked by some negative operator. My account of Mandarin would provide another example of a language that has wholly semantic negation. If negation is hosted by some verb-like element, as I have argued, it is not necessarily the case that it is being checked by some negative operator elsewhere in the sentence, and this would allow us to explain how negation behaves in contexts smaller than a sentence or VP.

Returning to the examples in (10) we have the scope facts already discussed: in these sentences, negation is critically only capable of negating its complement. (Or one can easily put this in terms of c-command if one prefers: the facts remain unchanged regardless.) If we were to assume that there is some sort of null negative operator that checks the overt negative element, this could be quite puzzling: under these assumptions, sentences (10b-d) should all have the same semantics, as they should all be examples of sentential negation. At LF, the null negative operator would Agree with the overt negative element, giving them the same scope.

That this prediction is not borne out provides evidence for the kind of account given by Zeijlstra (2004): while negation is hosted by a syntactic object inside of the structure, the actual semantics of negation are not expressed via some specific syntactic process. Instead, the negative element provides its individual semantic contribution only from its own lexical

characteristics and its position in the linear string without the need of some additional syntactic element to license its presence.

5.2 Serial Verbs

For this account to proceed, it is necessary that languages be capable of directly combining verbs. While this is hardly a new claim, the further elaboration requires that this, at least in this instance, must occur under a single vP, in a similar fashion to the nested VP structure of Hale and Keyser that led to vP (Hale and Keyser 1993). While it is far beyond the scope of the current work to propose a new structure of serial-verb constructions, it is worth mentioning them briefly.

As shown in the examples in 10, negation is quite capable of patterning inside of serial verb constructions[6], wherein its scope can be easily read off of its position in the linear string (a point we shall revisit shortly). But what is not allowed is something like the structure in (10e), where the verb is the last element of the verbal complex[7] : negation must always occur to the left of a verb.

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6 For the purposes of the argument at hand I am assuming that "modal" verbs in Chinese pattern like normal verbs.

7 The string itself can be marginal, assuming emphasis is placed to negate the object, as in a context where it is not Li You who was kissed, but someone else. I would argue that in these contexts negation is on the complement of the verb, and we are dealing with a different structure entirely.

(10) e. *Zhang San bixun keyi wen bu Li You
Zhang San need may kiss BU Li You

This falls out perfectly on my account, as the negative element is expected to have selectional properties that require a verb to be its complement. In (10e) the negative element instead has been given a nominal argument and the derivation crashes because the subcategorization frame of the negator has been violated.

5.3 Negative Scope and Serial Verbs

Finally, let us look at a prediction that is made by this account. If, as I have argued, the negative element is generated in part of the verbal complex, with the overt negative element in its specifier, then when this specifier is moved up to the specifier of LE-P, the null head of Neg-P should remain *in situ*, and this should be the position in which negation is read. That is to say, that from the point of view of the semantics, the scope of negation should be based upon its base-generated position inside of the serial-verb construction, rather than where the overt negative element in its specifier resides. This prediction is born out.

Looking at (11) (adapted from Sybesma 1997: pg. 226, his (15b)), we see that in the second clause after "but" that MEI has been raised to the specifier of LE-P, but negation actually

scopes over the semantics completion: there was certainly an event of letter-writing. Furthermore, it is not that MEI is negating just the perfective semantics: were that the case, then the second clause should be a direct contradiction of the first and the sentence should be no better than, “I wrote a letter yesterday, but I didn’t write a letter.”

(11)	Wo	zuotian	xie-le	yi-feng	xin,	keshi	mei(you)
	I	yesterday	write-Le	one-CL	letter	but	MEI(YOU)
	xie-wan						
	write-finish						
	“I wrote a letter yesterday, but I didn’t finish it.”						

Since negation in this construction seems to be over only “finish”, the null hypothesis is that negation scopes over it and only it, instead of where it is spelled out. This can easily be explained under the structure that I’ve argued for where the Neg-P is base generated and resides in an intermediate position in the verbal complex, and that MEI is not the head of Neg-P. Instead of scope being read off of the position of MEI in sentences like (11), it is understood as being lower down, precisely where negation is predicted to have been base-generated.

6. Conclusion

In this paper, I have discussed the use of the particle LE, and have shown that its radically different behavior in the syntax between its post-verbal and sentence-final forms is best accounted for under a model that supposes the existence of two homophonous particles: not only

are they different semantically and in their position in the string, but they behave very differently under negation.

With this two LE's account, I left aside the question of the syntax of sentence-LE, and focused on the question of why verb-LE and the sentential negation marker BU are in contrastive distribution. I looked at prior accounts for this phenomenon, but they were found to be either in need of an update to square with current syntactic research (Wang 1965) or were unable to make the correct predictions and maintain explanatory adequacy (Huang 1988).

I then motivated my own account, in many way similar to (Wang 1965), wherein LE and YOU are two allomorphs of the same functional head that requires some verbal or verb-like material to be moved into its specifier: either this can be the verb itself in affirmative contexts, or it can be the negation that is associated with the verbal complex in negative contexts. This was supported by the nature and distribution of negation in Mandarin and the sub-dialect Taiwanese Mandarin, in which post-verbal LE is pronounced identically to YOU in all contexts. Thus, I make the same, correct, generalizations as Wang (1965) while allowing them to occur in a manner coherent with modern syntactic theories.

Finally, I discussed theoretical implications for this account and how it reflects on other work in the field: specifically, that it provides evidence for Zeijlstra's model of how negation can be processed in the syntax-semantics interface. I then showed how the combination of my own proposal and Zeijlstra's makes a prediction about how negation should be interpreted in Mandarin: this prediction was borne out, and the semantics of negation seem to reside in an intermediate position inside the verbal complex, rather than where the overt negator is placed in the linear string.

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