



University of
Massachusetts
Amherst

Mandarin Negations as Negative Aspectual Elements

Item Type	article;article
Authors	Zhou, Xuan
Download date	2024-09-12 12:15:09
Link to Item	https://hdl.handle.net/20.500.14394/36950

Mandarin Negations as Negative Aspectual Elements¹

Xuan Zhou

State University of New York at Stony Brook

Mandarin has two distinct negatives, *bu* and *mei(you)*². Both may express sentence negation, and generally occur after the subject and before the predicate in simple sentences. As (1) show, they are not equivalent in meaning. Although they share the meaning of negation, they also seem to express different aspectual information. (1a) with *bu* conveys present or future refusal, whereas (1b) with *mei(you)* expresses negation of the past or perfect.

- (1) a. Zhangsan **bu** kan dianshi. b. Zhangsan **mei(you)** kan dianshi.
Z. NEG look TV Z. NEG look TV
'Z doesn't watch TV/won't watch TV' 'Z. didn't watch TV'

On the most widely assumed account of Chinese negation, namely, that of Li & Thompson (1981), *bu* is analyzed as expressing "neutral sentence negation" whereas *mei(you)* is viewed as negating the completion of an event. On this view, (1a) simply negates the proposition that Zhangsan-watch-TV, whereas (1b) negates the idea that TV watching by Zhangsan has taken place. Although widely held, this proposal is vulnerable to a range of counter-examples. If the only function of *bu* were to negate, then we might expect *bu* with all kinds of sentences including ones involving completed events. In fact, *bu* is never used in such contexts (2)-(3):

- (2) a. Zhangsan chi le fan. b. *Zhangsan **bu** chi le fan.
Z. eat LE meal
'Zhangsan ate'

¹I would like to thank Dan Finer, Richard Larson for the tremendous help they have given me over the years on this project and other related projects. Without them, this work wouldn't have been possible. I would also like to thank John Bailyn and Viviane Deprez for all the enlightening discussions and valuable suggestions that helped shaping this paper. I am also very grateful to my fellow students at the linguistics department, SUNY-Stony Brook for their support and encouragement.

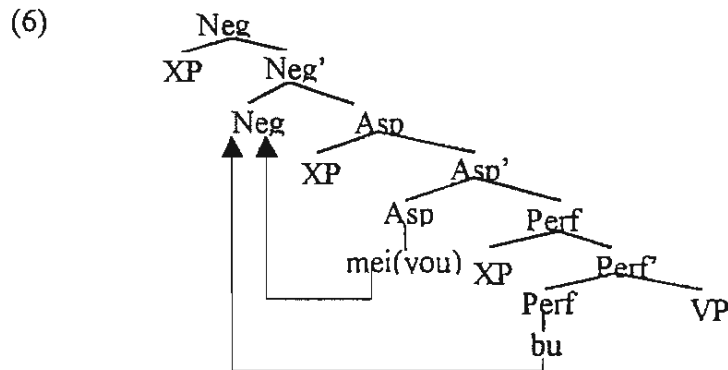
² Although there has been proposal that *mei(you)* is a different item from *mei*, I consider them to be one lexical item with *you* being optional given the fact that they have the same distribution and meaning.

- (3) a. Zhangsan chi guo fan le. b. *Zhangsan bu chi guo fan le.
 Z. eat GUO meal LE
 'Zhangsan has eaten'

Correlatively, if *mei(you)* were available only to negate the completion of events, we wouldn't expect it in sentences with progressive/non-completive aspect. Such sentences do occur, however. Moreover, *bu* is not always acceptable in such cases, despite what one would expect under Li & Thompson's generalization (4)-(5):

- (4) a. Zhangsan kan zhe ni (ne). b. Zhangsan mei(you) kan zhe ni.
 Z. see PROG you NE Z. NEG see PROG you
 'Zhangsan is/was looking at you' 'Z. isn't/wasn't looking at you'
 c. *Zhangsan bu kan zhe ni.³
 Z. NEG see PROG you
 'Z. isn't/wasn't looking at you'
- (5) a. Zhangsan zai kan dianshi. b. Z. mei(you) zai kan dianshi.
 Z. PROG look TV Z. NEG PROG look TV
 'Zhangsan is/was watching TV' 'Z. isn't/wasn't watching TV'
 c. Zhangsan bu zai kan dianshi.
 Z. NEG PROG look TV
 'Zhangsan isn't/wasn't watching TV'

In this paper I offer an alternative analysis of Chinese negatives based on the idea that although both express sentential negation, *bu* and *mei(you)* have distinct functions. Their functions, as seen above, are not correctly classified as "pure negation" or "negation of the completion of an event". Rather, they represent negations of two basic event types, namely, states and non-states (processes and transitions). I argue that *bu* negates states while *mei(you)* negates processes and transitions. The analysis draws crucially on the account of Chinese aspects proposed in Zhou (1996), according to which the Chinese clause contains 2 aspect projections, labeled "Asp" and "Perf" and which I argue to correspond to the projections of non-states and states respectively. The central proposals here are that *mei(you)* and *bu* arise in Asp and Perf, resp., and both raise to a higher Neg projection in surface syntax. Therefore *mei(you)* and *bu* differ in originating in different aspectual projections, but they converge in raising to the same target (Neg) before Spell-out.



³(4c) is fine when interpreted as volitional, refusal, such as 'Zhangsan refuses to/won't look at you'. Huang (1988) proposes, *bu* in this sense is to a zero model. Please see footnote 11 for more discussion.

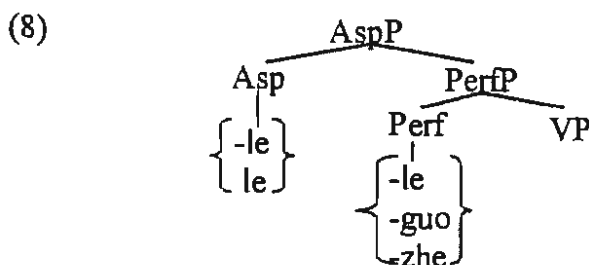
Section 1 provides some background assumptions from Zhou (1996) regarding Chinese aspectuals and their interactions. Section 2 presents arguments for analyzing *mei(ou)* as Asp, and *bu* as Perf, and for analyzing both as raising to Neg. Section 3 analyzes the complex interactions between *mei(ou)* and lower Perf elements, and between *bu* and higher Asp items. I end in section 4 by suggesting a natural semantic picture of this division of Mandarin negation and aspects, one which brings together proposals by Hsieh (1996) and Pustejovsky (1991).

1. The Two-Tiered Mandarin Aspectual System (Zhou(1996))

Zhou (1996) examines the syntactic behavior of major aspectual elements in Mandarin, including *le* “inchoative/completive(stative)”, *-guo* “perfective/experiential (P/E)” and *-zhe* “progressive/durative (P/D)”. (7) a-d are sentences with single aspectual markers. (7) e-f illustrate co-occurrences of 2 aspectual markers in a single sentence.

- | | | | |
|--------|--|----|---|
| (7) a. | Ta chi-le fan.
he eat-I/C meal
'He ate (a meal)/He has eaten (a meal)' | b. | Ta chi fan le.
he eat meal I/C
'He has eaten (a meal)' |
| c. | Ta chi-guo fan.
he eat-P/E meal
'He has eaten (a meal)' | d. | Ta chi-zhe fan.
he eat-P/D meal
'He is eating (a meal)' |
| e. | Ta chi-guo -le fan.
he eat-P/E-I/C meal
'He had eaten (a meal)' | f. | Ta chi-guo fan le.
he eat-Perf meal Asp
'He had eaten (a meal)' |

To account for the complex co-occurrence restrictions holding among these elements, Zhou proposes a two-tiered structure for Mandarin aspect, consisting of a lower projection labeled “Perf” (for “perfectivity”) and a higher projection labeled “Asp” (8a)⁴. Mandarin aspectual elements are analyzed as heads and verbal clitic morphemes, originating in either Perf or Asp, and bearing features [perf] and [asp] (respectively). Verbs marked are assumed to enter the numeration bearing [perf] and/or [asp]. These features are checked in the appropriate projection by movement.



⁴ See also Gu (1995) for the general idea that Mandarin contains two aspectual projections.

This is explained if aspectual *-le/le* express inchoative meaning, whereas perfective *-le* expresses a state. I will refer to *-le* with [perf] as “stative *-le*” or “Perf *-le*” and gloss it STAT. Similarly, I will refer to *-le/le* with [asp] as “inchoative-*le*” or “Asp *-le*” and gloss it INCH.

1.1. Aspectual Projection and Interpretation

The correlation between Mandarin aspectual structure and semantic interpretation is further developed in Zhou (in preparation). This work builds on the structural analysis of aspect types presented in Pustejovsky (1991). In brief, Pustejovsky proposes that all temporal aspects can be divided into 3 event types: states, processes, and transitions. States are single events with no oppositions⁵. Processes consist of a sequence of events identifying the same semantic expression. Transitions consist of a process followed by a state in which the events of the two define an opposition. Roughly speaking, stative verbs denote the event type of states, activity verbs denote processes, and accomplishment and achievement verbs denote transitions. Processes and transitions can be combined into one and thus all event types can be divided into two kinds: states vs. non-states. Pustejovsky (1991) proposes structural representations of these relations as shown in (13):



Returning to Mandarin aspects, when the sentence contains Perf *-zhe*, the resulting event type of the sentence is that of resultative state. In (14), Zhangsan is/was in the state of wearing a raincoat, which is the result of the action of putting on a raincoat:

- (14) Zhangsan chuan-**zhe** yuyi.
 Z. wear-Perf raincoat
 ‘Z. is/was wearing a raincoat’

When Perf *-guo* is used, the sentence will focus on the fact that the event has resulted in one’s having experience of doing something, in addition to indicating that the event has taken place. Therefore, Perf *-guo* also yields a state in that the experience has become a property/characteristics of the individual. In (15), *-guo* indicates that Zhangsan’s going to China has taken place in the past. However, the sentence also stresses the resulting state of the event, that is, since then Zhangsan has the experience.

- (15) Zhangsan qu-guo zhongguo.
 Z. go-Perf China
 ‘Zhangsan has the experience of going to China / Zhangsan has been to China’

⁵As Pustejovsky (1991) proposes, all events can be minimally decomposed into two subevents: *e* and *-e*. For example, the word *closed* in *The door is closed* introduces an opposition of relations: *closed* and *-closed* and it is evaluated to this opposition.

The event type of sentences with *le/-le* is less clear because of the existence of Perf *-le* and Asp *le/-le*. However, as shown in (12) above, it is possible to obtain different readings, especially with adjectival verbs. Sentence (12a) is ambiguous between a stative reading and an inchoative reading. We suggested that the stative reading is contributed by Perf *-le* whereas the inchoative reading by Asp *-le* because in (12b), the only possible reading, which is inchoative, is undoubtedly contributed by Asp *le*.

Therefore, aspectual markers of the category Perf, such as *-le*, *-guo* and *-zhe* seem to contribute stative event type to the sentence. Aspectual markers of the category Asp, namely *le* and *-le*, contribute non-state event types. Based on these, Zhou (in preparation) proposes that Pustejovsky's 3-fold division of aspects corresponds to the three possibilities for Mandarin aspectual projection made available in that analysis: a simple PerfP yields a pure stative phrase, a simple AspP yields a pure process phrase, and the combination of PerfP and AspP yields a composite aspect, namely the transition phrase⁶. The latter is typically identified with an inchoative, or change of state meaning. Structure and aspectual interpretation thus map to each other in a direct and intuitively appealing way.

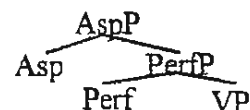
(16) a. STATE



b. PROCESS



c. TRANSITION



2. Mandarin Negation

The mutual distribution of *mei(you)* and *bu* is simple to state: the two elements cannot co-occur in the same sentence and both express sentence negation (17):

- (17) a. *Zhangsan **bu** **mei(you)** kan dianshi.
 Z. NEG NEG look TV
 b. *Zhangsan **mei(you)** **bu** kan dianshi⁷.
 'Zhangsan doesn't not watch TV'

With respect to the other aspectual elements of Mandarin, however, *mei(you)* and *bu* show a much more intricate pattern of distribution and interpretation. I summarize the basic generalizations for the two items below.

2.1. *Mei(you)*

The negative element *mei(you)* obeys two basic distributional constraints with respect to the aspectual markers of Mandarin:

⁶It is not yet completely clear to me at this point whether Chinese has sentences containing only a single AspP projection as shown in (16b). Since sentences with a single Asp *-le/le* also have the inchoative reading, which is of the event type of transition, it seems more plausible that Chinese AspP obligatorily selects for a PerfP, either covertly or overtly. I will leave this for further research.

⁷Although example (17b) is unacceptable on the reading indicated in the gloss, it is acceptable on the reading 'John didn't refuse to watch TV'. Following Huang (1988) I take the 'refusal reading' to be resulting from a structure where *bu* is attached to a zero modal (see also footnotes 3 and 11). The modal reading will be ignored throughout this paper.

- *mei(you)* does not co-occur with *-le* or *le*
- *mei(you)* does co-occur with *-guo* and *-zhe*

The first generalization has been widely noted in the literature (see Wang (1965), Teng (1978), Huang (1988), Ernst (1995), among many others) and is illustrated by (18) and (19). Recall that (12a), with postverbal *-le*, is ambiguous between a stative and an inchoative reading; this result was attributed to the ambiguous status of *-le*, which could be analyzed either as the morpheme bearing [perf] (“stative *-le*”) or as the morpheme bearing [asp] (“inchoative *-le*”). As (18) shows, *mei(you)* is incompatible with *-le* under either interpretation - whether stative or inchoative. (19) illustrates the same fact with a sentence containing unambiguous inchoative *-le*, such as (12b)⁸:

- (18) *Ta **mei(you)** pang-le yidiar.
 he NEG fat-STAT/INCH a bit
- (19) *Ta **mei(you)** pang yidiar le.
 he NEG fat a bit INCH

The second generalization is illustrated in (20)-(21). The former contains perfective/experiential *-guo* (P/E); the latter contains progressive/durative *-zhe* (P/D). *Mei(you)* can apparently function as a straightforward negation of the corresponding positive sentences.

- (20) a. Zhangsan kan-guo dianshi.
 Z look-P/E TV
 ‘Zhangsan has watched TV/Zhangsan has/had the experience of watching TV’
- b. Zhangsan **mei(you)** kan-guo dianshi.
 ‘Z. hasn’t watched TV/Z. hasn’t/hadn’t the experience of watching TV’
- (21) a. Zhangsan kan-zhe dianshi (ne). b. Z. **mei(you)** kan-zhe dianshi.
 Z look-P/D TV particle ‘Z. isn’t/wasn’t watching TV’
 ‘Zhangsan is/was watching TV’

If we consider these facts in the light of the structural analysis of Mandarin aspect presented in section 1.0, two clear generalizations emerge. First, elements with the feature [asp], such as the inchoative *-le* and *le*, never co-occur with *mei(you)*. Second, *mei(you)* co-occurs with at least some items with feature [perf], such as *-guo* and *-zhe*⁹.

2.2. *Bu*

With respect to Mandarin aspectual markers, *bu* shows a distribution that is essentially the inverse of that for *mei(you)*:

- *bu* co-occurs with inchoative *le*

⁸The incompatibility of *mei(you)* with at least Perf *-le* seems to be a fairly superficial phenomenon. See section 3.2 for further discussion.

⁹The only exception to the second generalization is the apparent incompatibility of *mei(you)* with perfective *-le*. I return to this point in Section 3.2.

b. [_{NegP} [_{Neg} \emptyset] [_{PerfP} [_{VP} [_v **kan**] [_{DP} **dianshi**]] [_{Perf} [_{Perf} **bu-**] **t**]]] [_{neg}]

c. [_{NegP} [_{Neg} [_{Perf} **bu-**] [_{Neg} \emptyset]] [_{PerfP} [_{VP} **kan dianshi**] [_{Perf} **t** VP]]]

Zhangsan **bu-kan** dianshi.
Z. NEG-look TV
'Zhangsan doesn't watch TV'

The fact that *mei(you)* and *bu-* raise to the same target Neg correctly predicts that they can't co-occur as sentence negations¹³ because they will compete for the same position:

(33) [_{NegP} Neg ... [_{Asp} *mei(you)*] ... [_{Perf} *bu-*]]

More precisely, since there is only one [neg] feature borne by Neg⁰, only one of *mei(you)* and *bu-* can check it. The presence of both of them as sentence negations will result in one of their [neg] features remaining unchecked and the derivation will crash.

3.2. Co-occurrence of *Mei(you)* with Perf Elements

The proposal that *mei(you)* is generated in Asp correctly predicts that it should co-occur with Perf *-guo* and *-zhe*, and that *mei(you)* can negate sentences with these items:

- (34) a. Z. **kan-guo** dianshi. b. Z. **mei(you)** **kan-guo** dianshi.
'Z. has watched TV' or: Z Asp look-Perf TV
'Z has/d the experience of watching TV' 'Z. hasn't watched TV' or:
'Z hasn't/hadn't the experience of watching TV'
- (35) a. Zhangsan **kan-zhe** dianshi (ne). b. Z. **mei(you)** **kan-zhe** dianshi.
Z look-Perf TV particle Z Asp look-Perf TV
'Zhangsan is/was watching TV' 'Z. isn't/wasn't watching TV'

Under current analysis, (34b) and (35b) have the initial structure of (36a). The verb *kan* moves from V to Perf, forming *kan-guo/-zhe* (36b), and PerfP in turn raises to Spec of AspP, allowing *kan-guo/-zhe* and *mei(you)* to check [asp] features in a Spec-head relation (36c). Finally, *mei(you)* raises and adjoins to Neg to check its [neg] feature (36d):

¹³It is however, possible to interpret sentences containing both *mei(you)* and *bu-* as involving a sentence negation and a constituent negation:

- a. Zhangsan *mei(you)* *bu-kan* dianshi.
Z. look TV
'Zhangsan didn't not watch TV/Zhangsan didn't refuse to watch TV'

And *mei(you)* is always interpreted as the sentence negation whereas *bu-* as the constituent negation:

- b. Zhansan *mei(you)* *bu-kan* dianshi, *ershi* *bu-mai* dianshi.
Z. look TV on the contrary buy TV
'It was not the case that Z wouldn't watch TV, (in fact) he wouldn't buy a TV'

- (36) a. [_{NegP} [_{Neg} ∅] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} mei(you)] [_{PerfP} [_{Perf} -guo/zhe] [_{VP} [_{vkan}] [_{DP} dianshi]]]]]]]]
 b. [_{NegP} [_{Neg} ∅] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} mei(you)] [_{PerfP} [_{Perf} vkan] [_{Perf} -guo/zhe] [_{VP} [_t] [_{DP} dianshi]]]]]]]]
 c. [_{NegP} [_{Neg} ∅] [_{AspP} [_{PerfP} [_{Perf} kan-guo/-zhe] [_{VP} t dianshi]] [_{Asp'} [_{Asp} mei(you)] t]]]
 d. [_{NegP} [_{Neg} [_{Asp} mei(you)]] [_{Neg} ∅] [_{AspP} [_{PerfP} kan-guo/-zhe dianshi] [_{Asp'} t t]]]

The one exception to the claim of compatibility between *mei(you)* and Perf is the non-occurrence of stative *-le*, as (37) is not a possible negative form of (12a) on reading i:

- (37) *Ta **mei(you)** pang-le yidiar
 he NEG fat-STAT a-bit

This is unexpected since (37) has a potential derivation exactly analogous to (36). Although not yet entirely clear to me at present, I note that whatever the source of incompatibility between *mei(you)* and stative *-le* it seems to be a fairly superficial one. In VP ellipsis cases, a VP with perfective *-le* appearing in an initial conjunct can serve as the antecedent for an elliptical VP in a later conjunct that is in the scope of *mei(you)* (38a); however, this elliptical VP containing *-le* cannot be spelt out explicitly (38b):

- (38) a. Zhangsan **kan-le** dianshi, Lisi mei(you) [_{VP} ∅] (kan-le dianshi).
 Z. look-Perf TV L. NEG
 'Zhangsan watched TV, Lisi didn't'
 b. *Zhangsan **kan-le** dianshi, Lisi mei(you) **kan-le** dianshi.
 Z. look-Perf TV L. NEG look-Perf TV

It seems to me that the correct generalization is one long embraced by Chinese grammarians, namely that *mei(you)* is simply exclusive with the morpheme *le*. More concretely, I tentatively suggest that it is in fact possible for *mei(you)* to negate stative Perf *-le* as a matter of syntax, however their surface co-occurrence is blocked by a PF morphological constraint prohibiting *mei(you)* from co-occurring with any element that is of the morphological shape *le*. I leave the precise formulation of this constraint for future research.

3.3. Co-occurrence of *Bu* with Asp Elements

The proposal that *bu* is generated in Perf correctly predicts that it should co-occur with the higher Asp element *-le* and *le*. Sentence (39) below shows that *bu-* co-occurs freely with sentence-final, inchoative *le*:

- (39) Zhangsan **bu-kan** dianshi **le**.
 Z. Perf look TV Asp
 'Z. now doesn't watch TV anymore/Zhangsan has become a non-TV-watcher'

(39) may be derived from (40a) by first raising VP to Spec of PerfP to check the verb *kan* with Perf *bu-* (40b); PerfP then raises to Spec of AspP to allow checking of *kan* with Asp (40c); finally, *bu-* raises to Neg to check the [neg] feature on *bu-* (40b):

- (40) a. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} le] [_{PerfP} [_{XP} e] [_{Perf} [_{Perf} bu] [_{VP} [_v kan] [_{DP} dianshi]]]]]]]]]
 b. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} le] [_{PerfP} [_{VP} [_v kan] [_{DP} dianshi]]] [_{Perf} [_{Perf} bu] t]]]]]]
 c. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{PerfP} [_{VP} kan dianshi] [_{Perf} bu t]]] [_{Asp'} [_{Asp} le] t]]]]
 d. [_{NegP} [_{Neg} [_{Perf} bu] [_{Neg} \emptyset]] [_{AspP} [_{PerfP} [_{VP} kan dianshi] [_{Perf} t t]]] [_{Asp'} [_{Asp} le] t]]]]

3.3.1. *Bu-* and Clitic *-le*

Although it is possible for *bu-* to co-occur with the sentence-final inchoative *le* as in (39), it never seems to co-occur with the bound inchoative *-le*, as shown by (41):

- (41) *Zhangsan bu-kan-le dianshi.
 Z. Perf-look-Asp TV

I suggest that the derivation of (41) is blocked by the *Head Movement Constraint (HMC under Relativized Minimality)*, which states that a head X can only move to the minimally c-commanding head position. And minimal c-commanding is defined as b minimally c-command a iff b c-commands a and there is no g, such that g c-commands a and does not c-command b. In order to derive (41) from (42a), VP first raises to the Spec of PerfP, allowing *kan* to check features with *bu-* (42b); *kan* then further raises onto Asp -*le* to check features, constituting a complex Asp head (42c); *bu-* needs to raise to Neg in order to check its [NEG] features. However, as shown in (42d), the head *bu-* cannot move to Neg since according to *HMC*, Neg does not minimally c-command *bu-*, given that the complex Asp head [_{Asp} *kan-le*] intervenes between *bu-* and Neg and that [_{Asp} *kan-le*] c-commands *bu-* but does not c-command Neg. Therefore, the raising of *bu-* to Neg is blocked. The derivation then crashes since *bu-* fails to check its strong [NEG] features.

- (42) a. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} -le] [_{PerfP} [_{XP} e] [_{Perf} [_{Perf} bu] [_{VP} [_v kan] [_{DP} dianshi]]]]]]]]]
 b. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} -le] [_{PerfP} [_{VP} [_v kan] [_{DP} dianshi]]] [_{Perf} [_{Perf} bu] t]]]]]]
 c. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} [_v kan] [_{Asp} -le]] [_{PerfP} [_{VP} t [_{DP} dianshi]]] [_{Perf} [_{Perf} bu] t]]]]]]
 d. [_{NegP} [_{Neg} \emptyset] [_{AspP} [_{XP} e] [_{Asp'} [_{Asp} [_v kan] [_{Asp} -le]] [_{PerfP} [_{VP} t [_{DP} dianshi]]] [_{Perf} [_{Perf} bu] t]]]]]]

4. From the Projections of NegP, AspP&PerfP to Pustejovsky's Event Structure

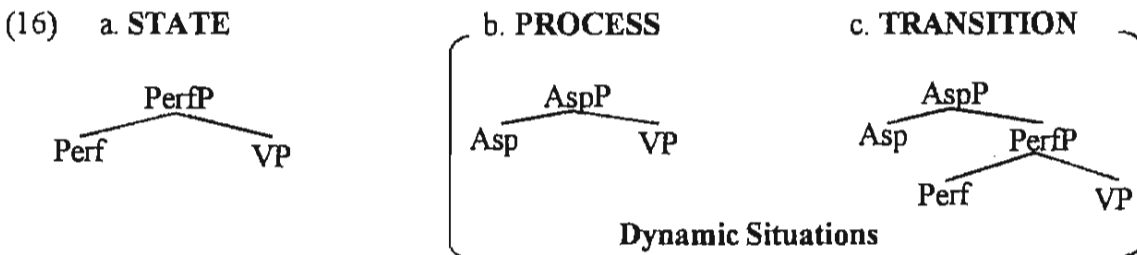
Given the logical interpretation of negation as “-”, Mandarin *bu-* and *mei(you)* raise a general question: why does Mandarin need 2 separate sentential negations? In the previous sections, we have seen that *bu-* and *mei(you)* show complex interactions with

aspectual elements *-le*, *le*, *-guo* and *-zhe*. We have suggested that these facts can be accounted for if *(-)**le* and *mei(you)* are instantiations of Asp, *bu-*, *-guo*, *-zhe* and *-le* are instantiations of Perf. Both *mei(you)* and *bu-* are aspectual elements with [neg] features and they must raise to Neg⁰ which is above AspP. In this section, I would like to discuss the semantic implications of the syntactic structure we proposed above and show that it brings together the semantic functions of *bu* and *mei(you)* proposed by Hsieh (1996) and the proposal of Pustejovsky (1991) for the syntactic structure of 3 basic event types.

Hsieh(1996) offers a thorough investigation of the semantic interactions of *bu-* and *mei(you)* with Mandarin aspects. By comparing them, Hsieh proposes that *bu-* generally negates a state while *mei(you)* dynamic situations. Hsieh notes that when the predicates are stative, such as *congming* 'intelligent', *gaoxing* 'be happy', *bu-*, but not *mei(you)* should be used; in contrast, when the predicates are non-statives, such as achievements like *faxian* 'discover', activities like *pao* 'run' or accomplishments like *hua nafu hua* 'draw that picture', *mei(you)* instead of *bu-* should be used: (data taken from Hsieh(1996)):

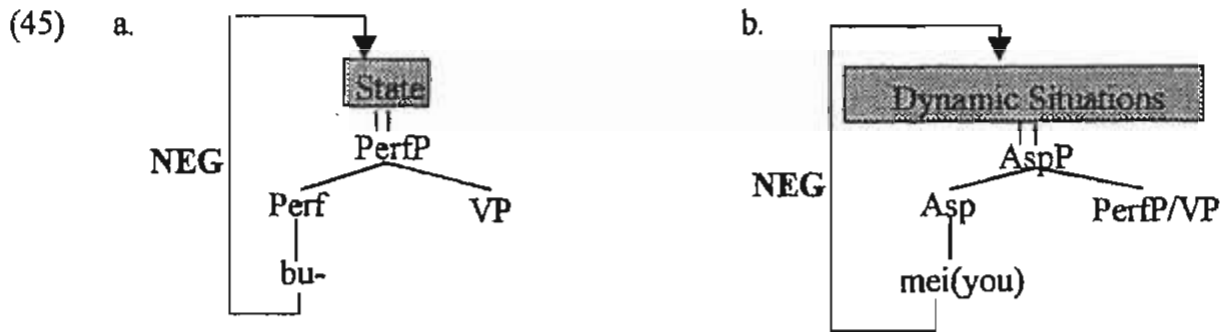
- (43) a. Ta **bu-/*mei(you)** congming. b. Ta **bu-/*mei(you)** shi xuesheng.
 he NEG intelligent he NEG be student
 'He is not intelligent' 'He is not a student'
- c. Ta **bu-/*mei(you)** gaoxing.
 he NEG happy
 'He is not happy'
- (44) a. Ta **mei(you)/*bu-** faxian naben shu. c. Ta **mei(you)** pao bu.
 he NEG discover that-CL book he NEG run step
 'He didn't discover that book' 'He didn't run'
- b. Ta **mei(you)** hua nafu hua.
 he NEG draw that-CL picture
 'He didn't paint that picture'

In section 1.1, we have shown the direct correspondence between Mandarin aspectual projections and Pustejovsky's 3-fold division of aspects: a simple PerfP corresponds to a stative phrase, a simple AspP represents a process phrase and the combination of PerfP and AspP yields a transition phrase, as shown in (16), and process and transition together correspond to the dynamic situations in Hsieh (1996)'s term:



The proposal that *bu-* is generated in Perf, which is the projection of the stative aspect and *mei(you)* in Asp, the projection of the dynamic aspects (process and transition)

thus directly reflects the semantic generalization by Hsieh (1996): *bu-* is the negation of states whereas *mei(you)* is that of dynamic situations:



The question we raised above is thus answered: Mandarin needs both *bu-* and *mei(you)* as sentential negation because they are in fact negations of two different basic aspects, namely states and dynamic situations.

References

- Belletti, A. 1990. Generalized verb movement., Turin: Rosenberg and Tellier.
- Ernst, T. 1995. Negation in Mandarin Chinese. *Natural Language and Linguistic Theory* 13: 665-707.
- Gu, Y. 1995. Aspect licensing, verb movement and feature checking. *Cahiers de Linguistique-Asie Orientale* 24(1): 49-83.
- Haegeman, L. 1995. *The syntax of negation*. Cambridge University Press.
- Henne, H. 1977. *A Handbook on Chinese Language Structure*. Universitetsforlaget, Oslo-Bergen-Tromsø.
- Hsieh, M. 1996. Negation in Chinese and functional projections, Manuscript, USC.
- Huang, C-T James. 1988. *Wo pao de kuai* and Chinese Phrase Structure. *Language* 64.2.
- Laka, I. 1990. Negation in Syntax: On the Nature of Functional Categories and Projections. Unpublished Ph.D. dissertation, MIT.
- Li, C. & S. Thompson. 1981. *Mandarin Chinese: A Functional Reference Grammar*. Berkeley and Los Angeles, California: University of California Press.
- Ouhalla, J. 1990. Sentential negation, relativized minimality and the aspectual status of auxiliaries. *Linguistic Review* 7: 183-231.
- Pollock, J. 1989. Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry* 20: 365-424.
- Pustejovsky, 1991. The syntax of event structure. *Cognition* 41. Oxford: Blackwell.
- Rizzi, L. 1990. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Teng, S. 1973. Negation and aspects in Chinese. *Journal of Chinese Linguistics* 1: 14-37. Berkeley, CA.
- Teng, S. 1978. Negation in Chinese: Mandarin and Amoy. *Journal of American Oriental Society* 98.1.
- Wang, W. 1965. Two aspect markers in Mandarin. *Language* 41.3: 457- 470.

Zannuttini, R. 1991. Syntactic Properties of Sentential Negation: a comparative study of Romance languages, unpublished Ph.D. dissertation, University of Pennsylvania, Philadelphia.

Zhou, X. 1996. The interaction of the Mandarin aspectual particles *guo*, *le* and *zhe*. Proceedings of CLS 32 Main Session, University of Chicago.

Department of Linguistics
State University of New York at Stony Brook
Stony Brook, NY 11794

xzhou@semlab2.sbs.sunysb.edu