

## Events and the Headed Aspectual Structure: The Syntax–Lexicon Interface\*

Sang-Geun Lee  
(Korea University)

Lee, Sang-Geun. 2011. Events and the Headed Aspectual Structure: The Syntax–Lexicon Interface. *Linguistic Research* 28(3), 569–584. Extending the headed aspectual structure proposed by Li (1993) to the lexical decomposition of an eventive verb, I propose a model of mapping from lexicon to syntax where the event starts its life as two distinctively defined subevents, Asp(ectual)-head and Asp(ectual)-complement, which are directly reflected in two layers of verbal constituency structure, i.e., small vP and Verbal nucleus Phrase (VnP). It turns out that this model successfully explains away the notorious syntax-semantics mismatch in Chinese without creating the same troubles as Huang's (1993, 1994) analysis would. (Korea University)

**Key words** decomposition, events, headed aspectual structure, mapping

### 1. Introduction

Though it is uncontroversial that the Davidsonian semantics of underlying events, which are counted as extra arguments for action verbs, is accepted as a central part of semantic theory, the question has still remained unclear as to how the semantics of underlying events is related to the syntax of verb phrase. To be more specific, where is the event argument located within the standard theory of syntactic structure (Kratzer 1989, Diesing 1992, Huang 1993, 1994, Cowper 1999, Lee 2008 among others)?

For Kratzer (1989), the notion of underlying events in the Davidsonian semantics is identified with that of spatio-temporal locations in the syntax, though Kratzer (1989) herself is not so sure about this identification. In contrast, for Huang (1993, 1994), who obviously denies the Kratzerian spatio-temporal location arguments as

---

\* I am deeply thankful for the reviewers' insightful comments and suggestions. They have guided me through several hidden traps that my analysis of events would otherwise fall into. Of course I am the person responsible for all errors that might occur in this paper.

events, the Davidsonian event argument is identified with event argument *per se* which serves as complement to such abstract aspectual predicates as DO, CAUSE, and BECOME (cf. Hale & Keyser 1993). It amounts to saying that only the VP-internal, not VP-external, complement is understood as the realization of events.

In section 2, I introduce an interesting set of Chinese data that shows the syntax-semantics mismatch, which Huang (1993, 1994) attempts to solve by assuming that the nominalized functional projection, IP[+N], which is understood to denote an event, intervenes between the higher aspectual predicate DO and the lower verb. I will argue that Huang's (1993, 1994) treatment of events as IP[+N] in the syntax is on the wrong track from the very first moment. In section 3, I propose a model of mapping from lexicon to syntax, according to which the event starts its life as two distinctively defined subevents, Asp(ectual)-head and Asp(ectual)-complement, through lexical decomposition and directly reflects on the verbal constituency (cf. Grimshaw 1990, Li 1990, 1993, Pustejovsky 1991, 1995, Levin & Rappaport 1995, 2005, Ramchand 1996, 2008 among others). This model will eventually allow us to dispose of the problems that Huang (1993, 1994) previously ran into. I will then devote section 4 to what follows from the direct mapping of an event onto the verbal constituency.

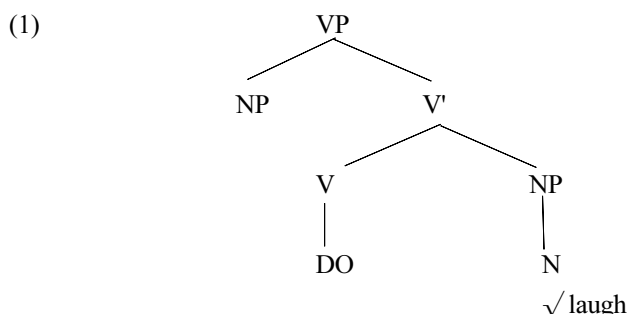
## **2. Events as VP-internal Event Arguments *per se*?**

### **2.1 Events and the Syntax-Semantic Mismatch in Chinese**

Based on the idea of lexical decomposition (Jackendoff 1990, Hale & Keyser 1993, Williams 1994), Huang (1993, 1994) attempts to interpret the notion of events to be located within the standard theory of syntactic structure, and concludes that events are realized in the syntax as event arguments *per se* that function as complements to the aspectual predicate, i.e. DO, CAUSE, OCCUR, or BE, that occupies the higher position of the Larsonian VP-shell structure.

The lack of an account of the internal mechanism, by which semantic structures and syntactic structures are connected, leads some linguists such as Jackendoff (1990), Hale & Keyser (1993), and Williams (1994) to pursue the idea that the meaning of a lexical item is highly structured and hence constrained already in the

lexicon. Hale & Keyser (1993) suggest analyzing such intransitive action verbs as *laugh* as formed through the lexical operation of verb movement, which is represented in the following Lexical Relational Structure (LRS):



The LRS of *laugh* in (1) implies that the traditional notion of verb as intransitive is introduced to the syntax after the root noun  $\surd laugh$  is incorporated into the aspectual predicate *DO* in the lexicon.

Though the composition of a root noun and the aspectual predicate *DO* in the LRS is simply assumed to form a hierarchically organized lexical structure in English, it has been already well known that the two decomposed parts of a verb are realized as two distinctive lexical items in the Japanese (as well as Korean) syntax, that is, the so-called light verb and the verbal noun. This is illustrated in (2):

- (2) Taroo-ga [VP *seki*(-o)      *shi*-ta].  
       Taroo-Nom    cough(-Acc) do-Pst  
       'Taroo coughed.'

The contrast between the LRS of (1) and the verb phrase of (2) shows that the English root noun  $\surd laugh$  is understood as complement to the higher aspectual predicate *DO* in the lexicon while the Japanese verbal noun *seki* 'cough' is overtly realized as object complement with an accusative case-marker to the so-called light verb *shi* 'do'. Taking the event-denoting verbal noun in Japanese syntax as an overt realization of event argument *per se*, Huang (1993, 1994) concludes that the Davidsonian notion of events can be extended even to English syntax, where they are theorized as root nouns in the lexicon that serve as complements to the higher

aspectual predicate DO.

As for the realization of events in the syntax, Huang (1993, 1994) continues to argue that Chinese behaves differently from the two languages, that is, it is different from English in that the higher aspectual predicate is represented as empty predicate in the syntax, and it is also different from Japanese in that verb raising (noun incorporation in (1)) actually takes place in the syntax.

By paying special attention to the nature of verb raising in Chinese, Huang (1993, 1994) attempts to show that the notion of events can be represented as VP-internal complement to the higher aspectual predicate.

Note the following interesting pattern of syntax-semantics mismatch in Chinese:<sup>1</sup>

- (3) a. ta kan shu kan-le san tian. (Huang 1994: 592-3)  
       he read book read-Perf three days  
       ‘He read books for three days.’  
       b. ta chang ge chang-le liang ci.  
       he sing song sing-Perf two times  
       ‘He sang songs twice.’
- (4) ta mai-le yi-ben shu.  
       he buy-Perf one-CL book  
       ‘He bought a book.’
- (5) a. ta kan-le san tian shu. (Huang 1994: 592)  
       he read-Perf three days book  
       ‘He read books for three days.’  
       b. ta chang-le liang ci ge.  
       he sing-Perf two times song  
       ‘He sang twice.’

In (3), the Chinese measure phrases *san tian* ‘three days’ and *liang ci* ‘two times’, which fall on the sentence-final position, quantify over the events of reading and singing in much the same way as the prenominal classifier *yi-ben* ‘one-CL’ in (4) quantifies over the physical entity *shu* ‘book’.

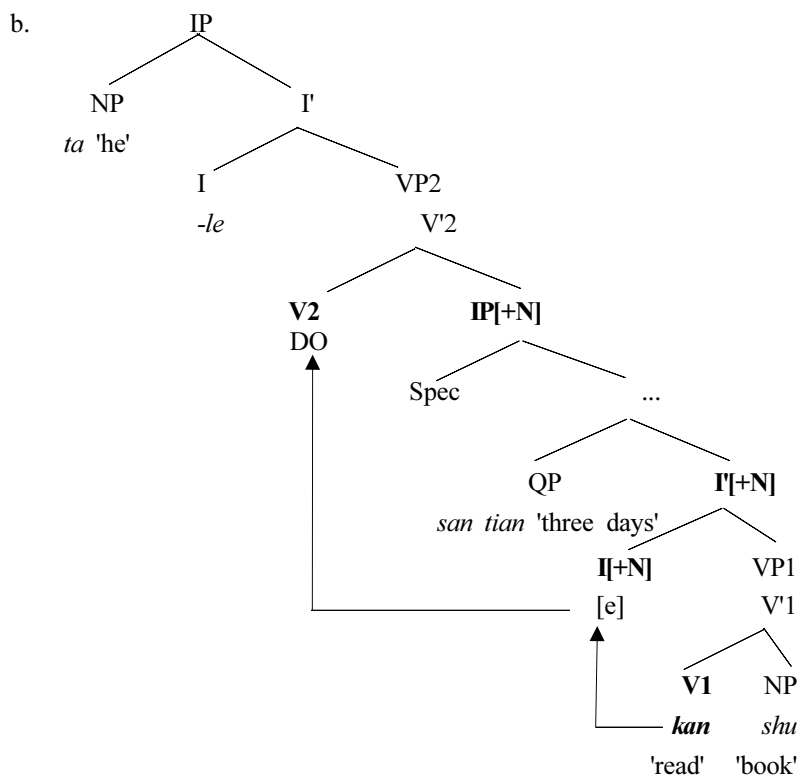
Given these two patterns of quantification, i.e., quantification over events and

<sup>1</sup> The exceptional pattern of the sentences in (3a, b) illustrates the verb copying construction, where the verb *kan* ‘read’ occurs twice, before the internal argument and before the adverbial expression.

physical entities, what is interesting with the data in (5) is the syntax-semantics mismatch. In (5), the measure phrases of duration/frequency *san tian* 'three days' and *liang ci* 'two times' should logically quantify over the events denoted by the verbs, and yet their syntactic position follows the same pattern of prenominal classifiers that quantify over physical objects.

Huang (1993, 1994) suggests that this syntax-semantics mismatch may be explained if we analyze the construction in (5) as involving the process of verb-raising, which is illustrated in (6):

- (6) a. ta *kan*-le san tian (de) *t* shu.  
       he read-Perf three days('s) book  
       'He read books for three days.'



Assuming that the Chinese sentence in (6a) has the structure of (6b), where the

quantifier QP *san tian* ‘three days’ is in c-command relation to the nominalized constituent I’[+N] of *kan shu* ‘reading book’, Huang (1993, 1994) literally translates the sentence in (6a) as such that he did three days of book reading. After the lower verb *kan* ‘read’ raises to the higher abstract predicate DO and further to the aspectual marker *-le*, the sentence will have the correct surface form.

In this view, the syntax-semantics mismatch in (6a) is reduced to the familiar case of gerundive nominalization, where the duration/frequency phrase is understood as quantifying over the nominal category (I’[+N] in (6b)) that represents an event. This analysis of event-denoting gerundive nominalization makes it possible that the semantics of an event can be directly read off from its syntax. And, what counts as the event arguments *per se* in (6b) is the nominalized category I’[+N], which serves as complement to the higher aspectual predicate DO.

## 2.2 Some Problems for the VP-internal Event Argument *per se*

One technical problem for Huang’s (1993, 1994) analysis of Chinese duration/frequency phrases over events is related to improper movement. As I have pointed out in (6), which is repeated below for convenience, Huang (1993, 1994) assumes that the lower verbal head has moved from the VP to the higher event predicate DO through the nominalized functional node IP[+N] denoting an event:

- (6) a. ta *kan-le* san tian (de) *t* shu.  
       he read-Perf three days(‘s) book  
       ‘He read books for three days.’  
    b. [IP ta -le [VP DO [IP Spec san tian [e] [VP *kan* [NP shu ]]]]]

One problem for Huang’s (1993, 1994) analysis in (6) is that the verbal head (V) *kan* ‘read’ stops by the functional projection, IP, on its way to the higher aspectual predicate (V) DO. This movement, V-I-V, is a typical example of what Li (1990) called improper movement at the level of X.<sup>2</sup>

<sup>2</sup> Li (1990) shows that a typical improper XP-movement violating ECP is also observable in Xo-movement, arguing that any Xo-movement starting from a lexical head position and coming back into another lexical head position through a functional head position. This case looks like improper head movement; the first movement is to a [+functional] category, and the second

Li (1990) argues that head-movement from a non  $\Theta$ -assigning head to a  $\Theta$ -assigning head is improper though head-movement from one  $\Theta$ -assigning head to a non  $\Theta$ -assigning head is proper. Given this general prohibition, the movement of the head ( $V1 \rightarrow I[+N] \rightarrow V2$ ) in (6b) reminds us of the same kind of improper movement. This is because the functional head  $I[+N]$  interferes with the linkage between the two  $\Theta$ -assigning heads, the higher V and the lower V, which leads to a kind of improper movement.

Another problem for Huang's (1993, 1994) analysis in (6) comes from his treatment of the VP-internal complement,  $IP[+N]$ , as a syntactic realization of the event argument *per se*.

The idea that the lexical meaning of a verb can be decomposed into a limited number of abstract aspectual predicates (e.g., DO, BECOME, CAUSE, etc.) plus its own idiosyncratic lexical content, is not totally novel but has been around for a long time in the syntax as well as semantics (Dowty 1979, Larson 1988, Travis 1991, Harley 1995 among others).

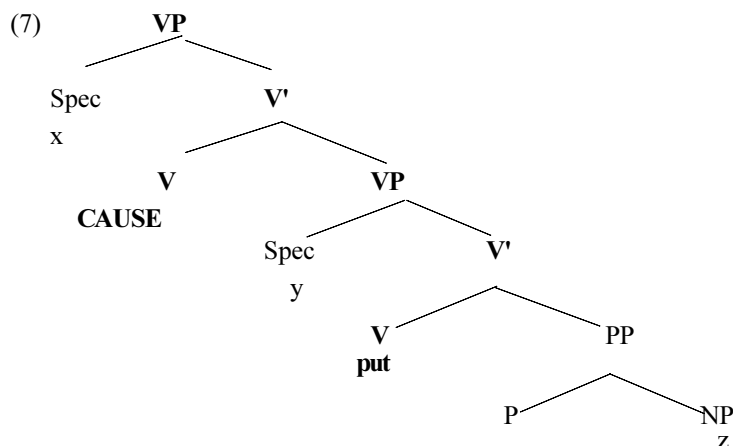
If we take this idea as it is, and when we break down the lexical meaning of an eventive verb into two subparts, the semantic notion of event denoted by the eventive verb should be defined as including, at least, the aspectual part that functions to provide the eventive nature for the verb. And thus, any analysis that excludes the aspectual part from the representation of event, it would lose its ground.

For example, Hale & Keyser (1993) analyzes the eventive verb *put* into two subparts in their Lexical Relational Structure (LRS), as in (7):

---

movement would be to a [+lexical] category. Li (1990: 404) illustrates the two structures schematically in the following way, where (ib) is an ungrammatical verb incorporation structure:

- (i) a. [VP1 [V1 V2i + V1] [VP2 NP [VP2 ti ]]]
- b. [VP1 [V1 V2i+V1] [CP ti'' [IP NP [I' ti' [VP2 ti ]]]]]



In the LRS of (7), the aspectual predicate CAUSE takes as its complement a VP that represents the idiosyncratic lexical content of *put*. The argument *x*, by virtue of resting in the Spec of CAUSE, has the theta-role of Agent (or Causer), and the argument *y* has the role of Theme by virtue of being located in the Spec of the lower VP denoting the lexical content of *put*.

One thing clear from this decomposition of the verb *put* is that the aspectual predicate CAUSE certainly plays a crucial role in representing the eventhood of the verb *put*. Accordingly, it would be problematic for Huang's (1993, 1994) account for Chinese duration/frequency phrases over events, where the event argument *per se* is assumed to correspond to the complement of the higher aspectual predicate, not the higher aspectual predicate itself. After all, Huang's (1993, 1994) attempt of representing the semantic notion of events as the event argument *per se* in the syntax seems to be on the wrong track from the very beginning.

To avoid these problems, I propose an alternative in the next section, where the VP constituency is referred to as a direct reflection of the lexical aspectual structure that includes two distinctively defined subevents.

### 3. Events and the Syntax-Lexicon Interface

Unlike Huang (1993, 1994), I propose that we reinterpret the Larsonian VP-shell structure as direct reflection of the headed aspectual structure in the finer-grained



lexicon (cf. Grimshaw 1990, Pustejovsky 1991, Li 1993).

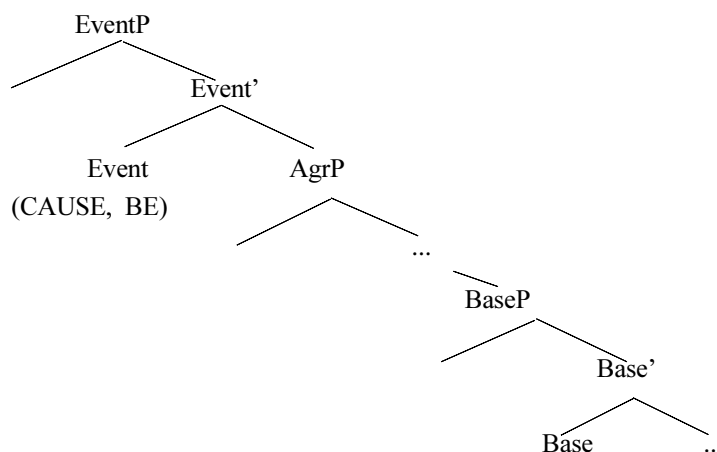
### 3.1 Modified Lexical Decomposition

Inspired by Pustejovsky's (1991, 1995) elaboration of event structure,<sup>3</sup> some syntacticians such as Harley (1995) and Arad (1998), whose theory is based on the syntax-lexicon interface, suggest that an eventive verb can be legitimately decomposed into two separate phrasal projections in the syntax without falling into the same logical pitfall as the classical generative semanticists once did (cf. Lakoff 1965, McCawley 1968 among others).

Adopting Fodor's (1970) spirit that the meaning of *kill* is not the same as that of *cause to die*, Harley (1995) proposes that an eventive verb, whose lexical meaning includes such initiating aspectual properties of CAUSE as part of the same event, be represented in two distinctive syntactic phrases, Event Phrase (EP) and Base Phrase (BaseP) in the syntax.

This new idea of decomposition is shown as in (8):

(8) Harley (1995: 89)



<sup>3</sup> Pustejovsky (1991, 1995) assumes that any verb in natural language can be classified as denoting one of the three basic event types: states, processes, or transitions. That is, when an eventive verb (e.g., accomplishments in Vendler (1967)) is classified as having the event structure of transition, it should contain two subevents represented as [e1 e2], where the first is interpreted as temporally preceding the second.

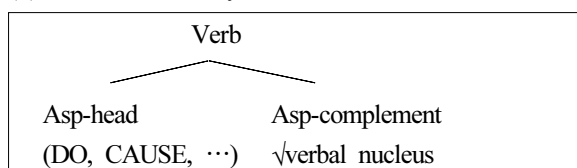
This lexical decomposition analysis in (8) allows such eventive sentences as *John opened the door* to be represented as *John CAUSE the door open* in the syntax, where the abstract aspectual predicate *CAUSE* denotes an initiative subevent while the lexical predicate *open* denotes the state subevent of result. It is certainly different from the classical proposal of generative semantics in that the lexical decomposition newly accepted in (8) assumes the aspectual property of *CAUSE* as part of the same event.<sup>4</sup>

### 3.2 The Finer-grained Lexicon

Adopting the direct mapping from the decomposed lexical representation to the verbal constituency in the syntax, I further suggest that the eventive verb's meaning is decomposed in its lexical entry as including Asp(ectual)-head and Asp(ectual)-complement (cf. Grimshaw 1990, Li 1993, Ramchand 1996, 2008), which are directly mapped onto the Larsonian VP-shell structure in the syntax.

In this view, the headed aspectual structure, i.e., A[spectual]-head and A[spectual]-complement, plays a crucial role for a systematic mapping from the lexicon to the syntax.

#### (9) The lexical entry of an eventive verb



<sup>4</sup> Fodor (1970) once argued against this type of lexical decomposition. If we analyzed *kill* as involving a complex structure of the abstract form *cause to die*, then we would expect *do so* in (ia) to be able to refer to *die*, just as *do so* in (ib) is:

- (i) a. \*John *killed* Mary, and it surprised me that she *did so*.  
 b. John *caused* Mary *to die*, and it surprised me that she *did so*.

The two-event of *cause to die* provides two possible domains for *do so* ellipsis, but the single event of *kill* does not. After all, Fodor's (1970) arguments against lexical decomposition hinge on the fact that the event structure of *kill* is not the same as that of *cause to die*. However, recent analyses based on the neo-generative semantics suggest that we can overcome such trouble by assuming that the single event is divided into subevents (Pustejovsky 1991).

With this headed aspectual structure in (9), I assume that the Asp-head represented by a limited set of aspectual predicates such as DO, CAUSE, BECOME, and BE determines the verb's aspectual type (cf. Vendler 1967), while Asp(ectual)-complement represented by the verbal nucleus designates the verb's idiosyncratic features.

## 4. Consequences

### 4.1 The Causative–Inchoative Alternation

One immediate consequence of this finer-grained lexical entry is that it can reasonably account for the distinction between verbs of change-of-state and verbs of existence.

Note the following gap in causative-inchoative alternation (cf. Mendoza & Mairal 2006):<sup>5</sup>,

- (10) a. Sally *broke* the window.  
       b. The window *broke*.  
       c. The window *breaks* easily.
- (11) a. Sally *destroyed* the building.  
       b. \*The building *destroyed*.  
       c. \*The building *destroyed* easily.

Given that both the verbs break and destroy in (10, 11) belong to the same aspectual type, e.g., accomplishment in Vendler's (1967) classification,<sup>6</sup> the fact that

---

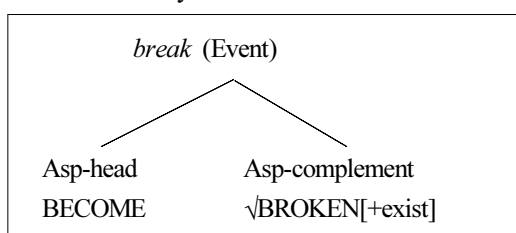
<sup>5</sup> Mendoza & Mairal (2006) report a similar set of contrastive data which can and cannot take part in the causative and inchoative alternation, and attempt to solve the contrast based on the constructional orientation. In this paper, I will not commit myself to the critical review on their constructional approach.

<sup>6</sup> Vendler (1967) proposes that verb meanings are classified into four types - states, activities, achievements and accomplishments - depending on their aspectual properties. Dowty (1979) suggests that these basic types of verbs are semantically characterized by the different kinds of intervals at which events are supposed to hold. States hold at instants, achievements hold at two adjacent instants, activities hold at minimal extended intervals and are iterable, and accomplishments hold at extended intervals but are not (usually) iterable.

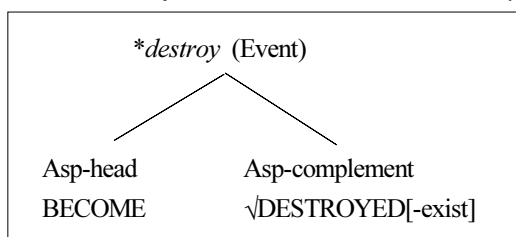
a certain sub-class of accomplishment verbs such as *destroy* behaves differently from the type of change-of-state verbs, has remained mysterious (Levin & Rappaport 1995, Folli 1999, Goldberg 2002, Mendoza & Mairal 2006).

Elaborating Li's (1993) notion of headed lexical structure into eventive predicates, I suggest that the inchoative verbs *break* and *destroy* should be delicately redefined in their lexical entry, especially with respect to the semantic feature of [existence], which is illustrated in (12):

- (12) a. The lexical entry of the inchoative verb *break*



- b. The lexical entry of the inchoative verb *destroy*



In (12a), the lexical entry of the inchoative verb *break*, which is known to denote change of states, includes an *Asp-head* (*BECOME*) that selects for the idiosyncratic feature of [+exist] as its complement. Then, we cannot assign the same headed aspectual structure with [+exist] in (12a) to the imaginary inchoative verb *destroy*, since it denotes not change of states, but change of existence. The imaginary inchoative verb *destroy* should be defined as such that it includes [-exist], not [+exist], in its lexical entry. But, this idiosyncratic lexical feature of [-exist], which is represented in *Asp-complement*, is not the right one that the aspectual head, *Asp-head* (*BECOME*), can legitimately select for as its complement.

After all, the idiosyncratic feature of [-exist], which is assigned to the *Asp-complement* of the imaginary inchoative verb *destroy* in (12b), cannot meet the

selectional properties of the inchoative aspectual predicate BECOME (cf. Siloni 2003). This explains why such sentences as in (11b, c) are not available in English.

## 4.2 The Syntax–Semantic Mismatch in Chinese Revisited

Previously in section 2.1, I have introduced Chinese sentences like (13a) as the case of syntax-semantics mismatch, since the prenominal modifier position of the measure phrase *san tian* ‘three days’ in (13a) does not match up with its semantic function of quantifying over the event denoted by the verb *kan* ‘read’.

- (13) a. ta kan-le san tian (de) shu.  
           he read-Perf three days(‘s) book  
           ‘He read books for three days.’  
       b. [IP ta -le [vP DO [IP[+N] san tian [vP *kan* [NP shu ]]]]]

To explain this mismatch, Huang (1993, 1994) assumes a nominalized functional projection, IP[+N], through which the verb *kan* ‘read’ located at the lower V raises to the higher aspectual verb DO and further to the matrix inflection. However, I have pointed it out that the series of movement, V-I-V, would result in a kind of improper movement when we follow Li’s (1990) proposal that any X-movement starting from a lexical head position and coming back into another lexical head position through a functional head position should be prohibited as improper movement. In addition, I have brought Huang’s (1993, 1994) misinterpretation of events into our attention, arguing that the nominalized functional projection, IP[+N], which serves as complement to the higher aspectual predicate DO, cannot be defined as event argument *per se*, contra Huang (1993, 1994).

According to my proposal of the headed aspectual structure, which is assumed to directly reflect on the extended verbal constituency with the higher verb and the lower verb, the problematic Chinese sentence showing the mismatch of syntax and semantic can be reanalyzed as in (14):

- (14) [IP ta -le [vP *kan*-DO [VnP san tian [VnP *t* [NP shu ]]]].  
           he -Perf ✓read three days book  
           ‘He read books for three days.’

Thanks to the absence of any intervening functional projections, the analysis given in (14) does not create, at least, the same problem as Huang's (1993, 1994) analysis did. This is because the verbal nucleus *√read* that is base-generated in Vn is allowed via incorporation to adjoin to the higher aspectual predicate DO in small vP (cf. Hale & Keyser 1993, Harley 1995, Arad 1998, Ramchand 2008).

It does not involve any unnecessary or improper movement. Of course, the extended verb structure, small vP and VnP, in (14) is considered as reflection of the lexical decomposition, Asp-head (DO) and Asp-complement (*√READ*), of the eventive verb *read*.

## 5. Conclusion

While arguing that the phenomenon of syntax-semantics mismatch in Chinese can be explained in terms of the process of verb-raising, Huang (1993, 1994) assumes that the semantic notion of events is identified as nominalized functional projection IP[+N] that serves as complement to the higher aspectual predicates (e.g., DO, CAUSE, or BECOME).

The main purpose of this paper is to point out a couple of theoretical problems that the intervening functional projection IP[+N] in Huang's (1993, 1994) analysis may give rise to. I have proposed a model of mapping as alternative, according to which the headed aspectual structure in the lexicon is directly reflected on the verbal constituency in the syntax. This mapping turns out to naturally dispose of the previous problems which Huang (1993, 1994) faced with.

The finer-grained model of lexicon, which is based on the headed aspectual structure, suggests about the realization of events in the syntax that the semantic notion of events should not be defined as VP-internal complements to the higher aspectual predicate (DO, CAUSE, or BECOME). It amounts to supporting the idea that the notion of events should be defined as VP-external (Higginbotham 1985, Kratzer 1989, Diesing 1992, Heycock 1995, van Hout 1998, Cowper 1999 among others).

## References

- Arad, M. 1998. *VP-structure and the Syntax-Lexicon Interface*. Doctoral dissertation, University College London.
- Cowper, E. A. 1999. Grammatical Aspect in English. *Linguistic Review* 16: 205-226.
- Dowty, D. 1979. *Word Meaning in Montague Grammar*. Dordrecht: Reidel.
- Diesing, M. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Fodor, J. A. 1970. Three Reasons for Not Deriving 'Kill' from 'Cause to Die'. *Linguistic Inquiry*, 429-438.
- Folli, R. 1999. Causative/Inchoative Alternation in Italian. *Oxford University Working Papers in Linguistics* 4: 33-49.
- Goldberg, A. 2002. Surface Generalizations: an Alternative to Alternations. *Cognitive Linguistics* 13: 327-356.
- Grimshaw, J. 1990. *Argument Structure*. Cambridge, Mass.: MIT Press.
- Heycock, C. 1995. The Internal Structure of Small Clause: New Evidence from Inversion. *NELS* 25: 223-238.
- Hale, K. and Keyser, S. J. 1993. On Argument Structure and the Lexical Expression of Syntactic Relations. K. Hale and S. J. Keyser (eds.). *The View from Building 20: A Festschrift for Sylvain Bromberger*, 53-109. Cambridge, Massachusetts: MIT Press.
- Harley, H. 1995. *Subjects, Events, and Licensing*. Doctoral dissertation. MIT.
- Higginbotham, J. 1985. On Semantics. *Linguistic Inquiry* 1: 547-593.
- van Hout, A. 1998. *Event Semantics of Verb Frame Alternations: A Case Study of Dutch and Its Acquisition*. New York & London: Garland Publishing.
- Huang, C. J. 1993. On Lexical Structure and Syntactic Projection. ms. University of Californian-Irvine.
- Huang, C. J. 1994. Verb Movement and Some Syntax-Semantics Mismatches in Chinese. *Chinese languages & Linguistics* 2: 587-613.
- Jackendoff, R. 1990. *Semantic Structures*. Cambridge, Mass.: MIT Press.
- Kratzer, A. 1989. Stage-level and Individual-level Predicates. ms. University of Massachusetts-Amherst.
- Lakoff, G. 1965. *Irregularity in Syntax*. New York: Holt, Rinehart.
- Larson, R. 1988. On the Double Object Construction. *Linguistic Inquiry* 19: 335-391.
- Lee, S-G. 2008. When Event Meet Phrase Structure: Perception Verb Complements. *Linguistic Research* 25: 39-59.
- Levin, B. and M. Rappaport. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, Mass.: MIT Press.
- Levin, B. and M Rappaport 2005. *Argument Realization*. Cambridge: Cambridge University Press.

- Li, Y. 1990. Xo-binding and Verb Incorporation. *Linguistic Inquiry* 21: 399-426.
- Li, Y. 1993. Structural Head and Aspectuality. *Language* 6: 490-504.
- McCawley, J. 1968. Lexical Insertion in a Transformational Grammar without Deep Structure. *Proceedings of the Chicago Linguistic Society, volume 4*: 71 - 80.
- Mendoza, F. and R. Mairal. 2006. Grounding Lexical and Constructional Meaning in Metaphor and Metonymy. Paper presented at the IV International Conference on Construction Grammar. University of Tokyo.
- Pustejovsky, J. 1991. The Syntax of Event Structure. *Cognition* 41: 47 - 81.
- Pustejovsky, J. 1995. *The Generative Lexicon*. Cambridge, Mass.: MIT Press.
- Ramchand, G. 1997. *Aspect and Predication: The Semantics of Argument Structure*. Oxford: Oxford University Press.
- Ramchand, G. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press.
- Siloni, T. 2003. Active Lexicon. *Theoretical Linguistics* 28: 383-400.
- Travis, L. 1991. Derived Objects, Inner Aspect and the Structure of VP. Paper presented at NELS 22. University of Delaware.
- Travis, L. 2000. The L-Syntax/S-Syntax Boundary: Evidence from Austronesian. Ileana Paul, Viviane Phillips, Lisa Travis (eds). *Formal Issues in Austronesian Syntax*, 167-194. Dordrecht: Kluwer Academic Publishers.
- Vendler, Z. 1967. *Linguistics and Philosophy*. Ithaca: Cornell University Press.
- Williams, E. S. 1994. *Thematic Structure in Syntax*. Cambridge, Mass.: MIT Press.

**Sang-Geun Lee**

Department of English Language Education  
Korea University  
Anam-dong, Seongbuk-gu,  
Seoul 136-701, Korea  
Tel. 82-2-3290-2351  
E-mail: sleel6@korea.ac.kr

Received: 2011. 11. 07

Revised: 2011. 12. 02

Accepted: 2011. 12. 06