[REVIEW]

Inner Aspect: The Articulation of VP

By Lisa deMena Travis, *Studies in Natural Language and Linguistic Theory*
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1. Introduction

According to Rosen (2003: 323), “most research on the linguistic representation of events has associated events with either of the two modules (the lexicon and the semantics) that link language to conceptual experience.” Rosen suggests a third possibility for where events are encoded: the syntax. The book under review explores the third possibility and argues for the following phrase structure (p. 5):

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2. Overview

We will start this section by giving a brief summary of this book.

In Chapter 1, Travis summarizes the rest of the book and presents her main proposals. The main claim of the book is that there is an inflectional domain that appears “sandwiched between two lexical (thematic) domains (p. 1),” i.e. (Inner) Aspect. In the book she seeks to provide evidence that both the viewpoint aspect and situation aspect referred to in Smith (1991) are encoded syntactically (p. 1).

In Chapter 2, Travis aims to show that there is a position within the VP to which a maximal projection can move and that it is below the merged position of the external argument. At least two object positions exist: one for the logical object and the other for the derived object.

In Chapter 3, two functional categories, ASPP and E(vent)P, are argued for. The specifier of the former is the position to which the derived object moves via A-movement. The latter is the boundary between the lexical domain of VP and the inflectional domain.

In Chapter 4, Travis explores what parts of event structure can be mapped onto the configuration of the VP, examining the instances of Inner Aspect more carefully. She claims that the predicate classes proposed by Vendler (1967) can be represented in the parts and features of the articulated phrase structure.

In Chapter 5, Travis observes the relation of objects and Inner Aspect more closely, which is related to grammatical problems such as case marking and syntactic configuration. Although both viewpoint aspect and situation aspect appear to influence the grammatical marking of the object, only situation aspect, Inner Aspect, is related directly with the object.

In Chapter 6, she argues that ASP and E play a significant role in the event structure of articulated VP and that E is the edge of the domain of the lexicon, and thus the boundary between L-syntax and S-syntax.

In Chapter 7, Travis claims that achievements can be recognized linguistically as a class and that they contain a [+telic] ASP head without projecting a V₁P.

In Chapter 8, she suggests that coercion in some languages is made possible through a system of zero morphology. She argues that coercion operators belong to L-syntax, thus situation aspect, rather than viewpoint aspect.

Chapter 9 is the conclusion. Travis assumes that all languages have articulated VPs. The articulation in some languages is observed syntactically and others morphologically. All languages contain an Inner Aspect position.

The nine chapters are organized elaborately to argue for event-related functional categories and the articulated VP structure. Starting with the demonstration of the derived object position in Chapter 2, Travis construes the position with the specifier of ASPP and then introduces EP in Chapter 3. Then in Chapter 4, her discussion extends to the whole articulated VP structure which contains those two functional categories. After confirming that ASPP is VP-internal in Chapter 5, she presents her view on event structure and its status in syntax and lexicon and shows the roles of ASPP and EP in event structure in Chapter 6. Chapter 7 and 8 review the consequences of the previous chapters.

It is beyond the capacity of this paper to discuss every topic of this book, so we will focus our review on Travis's VP structure and event structure. We will present her discussion on VP structure and event structure discussed in Section 3–5, and discuss the status of V₁ in Section 6.

Before turning to the next section, two points should be noted with regard to Travis's research. First, her methodology is *The Middle Way* suggested

in Baker and McClosky (2007). It is placed between typological work and the most common examples of theoretical work that concentrate on one language or one language family. In particular, the evidence of the articulated VP is given from Tagalog and Malagasy, and then applied to English.

Second, Travis's approach is mainly syntactic, but at the same time, does not deny the combination of information from syntax, morphology, and semantics to investigate the event structure.

3. ASPP and EP

In Chapter 3, Travis argues for the existence of ASPP and E(vent)P. Let us begin with ASPP. Her unique claim is that ASPP, whose head is a functional category, appears between two VPs. According to Travis (p. 283), the articulated VP can be seen syntactically or morphologically depending on languages. As evidence for ASPP, she presents cases in which Spec of this position is the landing site of DP and cases in which its head is morphologically overt.

We will show the latter case, since this morphological account may be original, while in the former case, she mostly resorts to a collection of previous studies.

Let us consider two aspect markers in Tagalog (p. 57):¹

- (2) *nagtutumba* *n* + *m* + *pag* + RED + V
 IMPERFECTIVE ASP1 + TM + PAG + ASP2 + V
 'is taking out' [+start] [+incomplete]

Travis's claim is that ASP2, encoded by a complex rule of reduplication, is housed in Inner ASPP.² She considers *pag-* as a lexical part of the verb, thus ASP2 is in the position between two verbs. Then she extends this morphological analysis to the syntactic structure of the layered VP. In order to apply morpheme order to syntactic structure, she depends on Baker's (1985) Mirror Principle (p. 52):

- (3) Mirror Principle (Baker (1985: 375))
 Morphological derivations must directly reflect syntactic derivations (and vice versa).

¹ TM and RED in (2) stand for topic marker and reduplication respectively. The third line is added by the author of this review.

² In Travis (1992: 139), she calls Aspect1 outer aspect and Aspect2 inner aspect. In this book, however, she uses the term "to house (p. 57)," which may suggest that ASP2 in (2) is less directly related to Inner ASP.

Another argument comes from Navajo. In the complex predicate of Navajo, agreement morphemes and inflectional morphemes which carry the aspectual and tense information appear between idiosyncratic lexical materials.³

As for EP, Travis starts her argument by showing that there is a functional category, *F*, between *V* and *T*. First, she points out that in French and English, *F* is used for infinitival marking and that in English, it is used for positioning of the subjunctives. Second, in Nahuatl, the mood-related future morpheme co-occurs with the tense morpheme and thus the future morpheme is closer to the verb root as in (4) (p. 79). Similar cases are observed in Guyanese Creole and Sranan.

- (4) ni-quito-**z**-quia
 1sS-say-**FUT**-PST
 'I would have said.'

Third, in Malagasy, the morpheme of Actor Topic, *m-*, and that of Theme Topic, *-na*, appear in the functional category *F* (p. 82). If *m-*, which cannot check the case, appears in *F*, there is movement from Spec, VP to Spec, TP. If *-na* is in *F*, which can check the case, there is no movement. Although the presence of a functional category between *T* and *V* has been claimed since Pollock (1989), Travis's unique claim is that the functional category *FP* is *EP*, and that it is the boundary between *L-syntax* and *S-syntax*.

4. Articulated VP Structure

In Chapter 4, Travis describes two steps to her articulated VP structure. The first step is the VP-internal subject hypothesis, according to which VP represents the whole event. The second step is Larson's (1988) VP shells, the binary branching multiple VP structure.⁴ As a further step, she incorporates Hale and Keyser's (1993) idea that the heads of VPs have semantic content.⁵

Travis's representation of event structure as a phrase structure is as follows (p. 117):

³ Travis admits that there are other accounts for Tagalog and Navajo, but claims that her accounts are still plausible.

⁴ Travis also gives her own analysis of the double object construction.

⁵ Hale and Keyser (1993) argue that the external argument is introduced outside *L-syntax* while Travis argues that it appears in Spec, *V₁P*, i.e. within *L-syntax*.

Note also that Agent, the external argument, appears in the specifier of the upper V, i.e. V_1 in (1), which is a lexical category. We will discuss the properties of V_1 in Section 6.

In mapping event structure onto phrase structure, Travis resorts to Pustejovsky's (1991) argument that subevents must be encoded in the grammar. For instance, Pustejovsky's event structure of an accomplishment verb consists of subevents, a process and a final state. Travis incorporates this with Verkuyl's (1989: 44) feature system based on Vendler's (1967) classification of verbs (p. 107):

(6)

	–PROCESS	+PROCESS
–DEFINITE	State	Activity
+DEFINITE	Achievement	Accomplishment

Travis identifies [+/- definite] with [+/- telic]. Process is encoded in V_1 and telicity is encoded in ASP. The logical object position is Spec, V_2P , but this is not visible for the computation of telicity. In order for a Theme to be able to measure out a predicate, it must have moved to Spec, ASPP.

The phrase structures of four classes of verbs reflect the feature system in (6). The following are structures of Transitive Achievement and Accomplishment (p. 120):

5. L-Syntax and S-Syntax

In Chapter 6, Travis explores two levels of the computational component: L-syntax and S-syntax. EP is the boundary between L-syntax and S-syntax.

L-syntax and S-syntax can be distinguished. English lexical causatives such as *to thin*, *to break*, go through head movement in L-syntax. On the other hand, the productive causatives in English are always indicated by a separate lexical item in S-syntax and the results are predictable.

Tagalog and Malagasy have the lexical causative morphemes, *pag-* and *an-* respectively (p. 53):

- (8) a. **t-um-umba** X fall down b. **mag-tumba** Y knock X down
 s-um-abog X explode **mag-sabog** Y scatter X
 l-um-uwas X go to into the city **mag-luwas** Y take X to the city
 s-um-ali X join **mag-sali** Y include X

(8a, b) represent transitive alternation in Tagalog. (8a) are intransitives and (8b) are transitive examples. *Mag-* consists of *m-* and *pag-*. *Pag-* is the transitivizing morpheme which is generated in V_1 , the upper V, and responsible for assigning an agent role as well as housing an event variable. Thus, *pag-* is a lexical causative morpheme. However, there is another *pag-*, a part of the productive causative prefix *pag+pa* as in (9) (p. 166):

- (9) a. *magpabukas* 'W make Y open X'
 b. *m + pag + pa + ?? + bukas*
 M + PC + PA + LC + Root

This is similar to Malagasy productive causative, which consists of two morphemes, *an-* and *f-*. Travis concludes that what distinguishes the productive causative from the lexical causative is where the causative morpheme is generated on the syntactic tree—productive causatives are generated above E and lexical causatives are generated below E. Accord-

ing to Travis (p. 168), Tagalog productive causative *pag-* and its Malagasy counterpart *an-* appear in E, while Tagalog lexical causative *pag-* and its Malagasy counterpart *an-* take EP as their complement. The computational domain below EP is L-syntax and the domain from EP is S-syntax (p. 190).

The existence of L-syntax means that there is an overlap of the lexicon and the computational component up to EP. Travis gives two arguments for her claim that L-syntax is computational. One is Hale and Keyser's (1993) argument that denominal and deadjectival verb formation seems to be constrained by the Head Movement Constraint. The other is her own argument that the *pag-* drop in Tagalog is restricted by Sportiche's (1998) Doubly Filled Voice Filter, which is a part of syntax.

In order to distinguish English type causatives and Tagalog type causatives, Travis introduces the notion of M-words (morphological words) and E-words (event words) (p. 191). As for English, *wash* is one M-word and one E-word, while *make wash* is two M-words and two E-words. On the other hand, *m-an-f-an-sasa* ('make wash') in Malagasy and *m-pag-pa-0-bukas* ('make open') in Tagalog are one M-word and two E-words.

If a morpheme of an M-word goes beyond the E-domain, EP, the M-word is two E-words. English M-words do not go beyond the E-domain, while those of Malagasy and Tagalog do.

6. The Status of V_1

In this section, we will discuss the status of V_1 . Indeed, the main focus of this book is Inner Aspect and ASPP has been given much attention. However, V_1 is given as significant a role as ASPP in event structure in the latter part of the book.

One of the characteristics of Travis's articulated VP structure is that V_1P , whose head is a lexical category, appears between EP and ASPP. V_1 is the position that houses the lexical causative morpheme *pag-* in Tagalog, *an-* in Malagasy, and a null morpheme in English.

Let us summarize the four properties of V_1P . First, it is close to a light verb or a functor verb along the line of Ritter and Rosen (1993), but still it is a lexical category. Second, it is responsible for introducing an external argument. Third, it contains an event variable which is bound by E. Fourth, V_1 is one of three positions for telicity.

The first and second properties are related. Travis presents two criteria for lexical categories (p. 277). One of them is that if its head introduces an argument, it is a lexical category. Travis (p. 99) mentions that this cri-

terion is important for her account of Navajo in 3.2.2. So her claim that V_1 is a lexical category is dependent on her criterion of a lexical category.

This criterion should be compared with Kratzer (1996) and Pylkkänen (2008), who take the position that an external argument is not a true argument of a verb and that it is introduced by a functional category. We are not in the position to decide which position is preferable, but it should be noted that Travis also admits that V_1 is different from V_2 , a pure lexical category.

Now let us turn to the third and fourth properties of V_1 . As for the third property, it encodes the event variable bound by E . For instance, in order to account for the difference between *meet* and *know*, V_1 is specified with e (eventive) and s (stative) respectively (p. 270).

The fourth property of V_1 is that V_1 “will determine the overall interpretation of the predicate (p. 244).” The position of V_1 contributes to the semantic interpretation of natural endpoint, beginning point, arbitrary bound endpoints (p. 244).⁶

Travis’s treatment of the third and fourth properties in this book might be just descriptive, but her position in taking *the Middle Way* is maintained. Applying her approach to many other languages may pave the way to new findings in the study of event structure.

7. Conclusion

Let us return to Rosen (2003), from which we started our review. She points out four questions to be solved by the syntactic approach to the event structure.

- (10) i. the relation between viewpoint aspect and event structure (p. 354)
- ii. characteristics of the direct object and the event structure (p. 355)
- iii. mismatch of initiation and delimitation with Vendler’s classification (p. 356)
- iv. variation of thematic roles among verbs (p. 355)

As is evident from our discussion in the previous sections, Travis has made a serious attempt to answer the questions (10i–iii) and contributed to

⁶ It would be well worthwhile to discuss coercion, though we cannot do so here due to space limitations.

the development of syntactic approach to event structure.

In Tenny (1987: 213), the possibility of the existence of ASPP was suggested and it was noted that ASP determines “whether the verb phrase or aspect phrase will be delimited or non-delimited.” Since then, the property and position of ASPP have been one central issue in the syntactic approaches to event structure. While some assume ASPP with a null morpheme to account for telicity or delimitedness, Travis has turned to the real morphemes in Tagalog and Malagasy with the assumption of the Mirror Principle in order to demonstrate that Inner Aspect exists between lexical categories.

According to the author’s preface, Travis started to work on this theme in 1991. In order to argue for articulated VP structure, she has examined a considerable number of approaches and data and built her arguments based on them. This is especially true when she argues for the derived object position in ASPP. Furthermore, she has succeeded in combining the benefit of previous approaches and has developed them into a more plausible account. Above all, approaches of Hale and Keyser (1993), Pustejovsky (1991), Vendler (1967), and Verkuyl (1989) are integrated into her original syntactic account of event structure, dividing the computational component into L-syntax and S-syntax.

To many readers, some data and discussion in this book might look familiar, as parts of them have been published or circulated, and cited in many works. However, the compilation of discussion and data of various topics in this book may lead readers not only to a better understanding of her individual arguments in various languages but also to new findings through the whole picture of her comprehensive work.

It may be safe to conclude that this book is a landmark in the study of phrase structure, and can be recommended to researchers in the area of syntax, morphology, semantics, and those who are interested in the relation between syntax and lexicon.

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