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INTRODUCTION

The relationship between syntax and semantics has become a rich and fruitful topic of study over the last several decades. It is easy to see why: an adherence to principles in both of these domains at the same time constrains theories more than adherence to principles in only one domain. In this way, both syntactic and semantic theories benefit from work that is conducted at their interface.

This is nowhere more true than in the study of aspect. Syntactic theory on aspect certainly benefits from an understanding of aspectual semantics; one can hardly study the syntax of aspect without doing enough semantics to characterize the aspectual distinctions that one seeks to explain. Thus the meanings presented in Reichenbach's (1947) theory of tense (including the English perfect) are relevant for syntactic hypotheses. Reichenbach proposed that three times are referred to in every sentence: the Speech Time (ST), a Reference Time (RT) and an Event Time (ET). In his notation, a comma indicates simultaneity between two times, while a horizontal line indicates precedence. Present Tense is thus represented as ST, RT, ET, while Past Tense corresponds to ET, RT_ST, and Past Perfect to ET_RT, ST. Syntactic theories have tried to faithfully represent these semantic relations in terms of syntactic structure by proposing, for instance, to place the relation between ST and RT and that between RT and ET on two distinct syntactic levels (Zagona, 1990; Stowell, 1996; Demirdache & Uribe-Etxebarria, 1997). The syntactic hypothesis is relevant for the semantic ontology: concepts such as *reference time* and the possibility of relations between certain pairs of times, but not others, are not represented by special semantic diacritics on times, but may be structurally determined.

A difference between events and times also has a structural representation. Chomsky (1995, 2001) proposes that the syntactic structure of a sentence consists of two *phases*, a vP phase which describes an eventuality (event or state) and a higher TP/CP phase which places that eventuality at a time (present, past, or future) and in a world (the discourse world or some other

world). The relations between the entities introduced at different structural locations are then constructed according to strictly local principles, whether by syntactic chains (Guéron & Hoekstra, 1988, *e.g.*) or by semantic composition (Pancheva 2003, *e.g.*).

Extensions of Reichenbach's insight to other kinds of aspect by researchers such as Hornstein (1990), Klein (1994) and Smith (1997) allow us to ask questions concerning the manner in which the lexical content of the verb phrase interacts with the functional elements which make up the syntactic skeleton of the sentence. In particular, how does Aktionsart, or the shape of the eventuality in terms of semantic features like dynamic/stative, punctual/durative, or telic/atelic, interact with grammatical aspect morphemes which merge with the Tense node?

Vendler (1967) defined four types of eventualities in terms of semantic Aktionsart categories: States, Activities, Accomplishments and Achievements. Smith (1997) proposed a fifth eventuality type, the Semelfactive. Aspect, on the contrary, represents the speaker's "point of view" with respect to the eventuality type the vP defines. According to Smith, viewpoint aspect, as opposed to lexical aspect (Aktionsart) classifies an eventuality as either bounded or unbounded according to whether it is viewed from the outside (Perfect Aspect) or from the inside (Imperfective Aspect). Depraetere (1995) and Bertinetto (2001), among others, cautioned that lexical aspect and grammatical aspect must be strictly distinguished. (A)telicity, for example, is a lexico-semantic Aktionsart feature of vP, while (im)perfectivity is based on a grammatical aspect morpheme. Thus the aspectual morpheme which marks an imperfective vP is blind to the Aktionsart difference between states and events. Imperfectivity in the past tense in French is suitable for states as in (1a), as well as for events as in (1b) Similarly, stative as well as eventive predicates can occur with Perfective Aspect, as in (2a) and (2b) respectively.

- (1) a. Jean pesait 80 kilos.
 Jean weigh-IMPF 80 kilos
 'Jean weighed 80 kilos.'
- b. Jean construisait une maison.
 Jean build-IMPF a house
 'Jean was building a house.'
- (2) a. Jean a aimé Marie (mais ne l'aime plus).
 Jean has love-PASTPPL Marie but NEG 3SG-love more
 'Jean loved Marie, but doesn't love her anymore.'
- b. Jean a frappé la table.
 Jean has hit-PASTPPL the table
 'Jean hit the table.'

The semantic distinctions between Aktionsart and viewpoint aspect seem at

first to correspond directly to what we expect given the structural hypothesis: Aktionsart is constructed within the vP, while viewpoint aspect is introduced by a projection between the vP and tense. Yet things are not always so simple. Although located in the higher vP-external syntactic phase of the sentential structure, both Aspect and Tense may be sensitive to the lexical Aktionsart of the vP which constitutes the lower phase. Thus progressive aspect which “views an event from the inside” selects only a dynamic eventuality, whether the progressive construal is optional, as in the French present tense in (3a) (where a habitual/generic construal is also possible) or obligatory as with English *be -ing*:

- (3) a. Jean parle au téléphone.
 Jean speak on-the telephone
 ‘Jean is speaking on the phone.’
 b. John is speaking on the phone.
 c. *John is knowing Mary.

Will phrases and *have*-causative phrases themselves appear to have different Aktionsarten according to the Aktionsarten of their complements (Copley, 2002, 2003; Copley & Harley, 2010).

Moreover, in a number of languages, in particular in creole languages which lack tense morphemes, states are located at the present time, while events are construed as occurring in past time (the *factativity* effect; see Welmers & Welmers, 1968, and, *e.g.*, Déchaine 1993).

Not only are the syntactic and semantic relationships between lexical Aktionsart and higher functional heads still under discussion, but so too is the nature of the semantics of aspect itself. We can speak not only of a syntax-related reading of the title of this volume, “Constructing Aspect,” but also of a semantics-related reading, on which aspectual meanings are constructed out of the semantic primitives such as times and events that are referred to in the logical form. While the basics of aspectual meanings are relatively well-understood, the precise properties of the semantic ontology is still very much at issue. It is interesting to note that much syntactic and syntactically informed work, including the papers in this volume, makes use of syntactically visible semantic features such as [+bounded], [–telic], etc. instead of going into the details of how, *e.g.*, telicity might be constructed (Krifka, 1998, Filip 2005, 2008, *e.g.*). This should not be seen as a barrier to communication between syntacticians and semantic ontologists; there should be relatively straightforward ways to translate between these frameworks.

The papers in this volume offer syntactic characterizations of aspectual phenomena that advance our knowledge of both the syntax and the semantics of aspect. Syntactically, they deepen our understanding of the structural relation between Aktionsart in vP and higher heads. They also

provide important direction for the study of the semantic ontology of which aspect is constructed. We can expand this point with particulars. Firstly, these studies provide an opportunity to determine which morphosyntax is strictly related to semantics and which is not. For instance, in Mahapatra's chapter, he appeals to the PF principle of distinctness (Richards, 2010) to account for the existence of a certain morpheme in the grammar, and Schulz's chapter puts the morphologically hybrid form of stative *have got* into a diachronic context. Secondly, the chapters advance our knowledge of the differences between events and states. Especially interesting is the behavior of predicates that do not fit neatly into existing Aktionsart/type theory such as the atypical stative/atelic verb *sleep* cited in Mahapatra's and Knittel's chapters. A syntactic understanding of grammaticalization, as in Schulz's chapter, is also expected to provide clues to the relationship between lexical and functional material: what changes, both syntactically and semantically, as pragmatic forces provoke a shift from an eventive predicate to a stative predicate via grammaticalization? Knittel's chapter makes an important point indicating where similarities of morphosyntactic expression (*i.e.* a boundedness feature) should indicate similar semantic material, albeit in different semantic domains. Finally, in Corre's article, close attention is paid to both the meaning and the morphosyntax of Russian prefixes.

In his contribution "Grammaticalized situation types and the parameters of aspect for Oḍia" **Bibhuti Mahapatra** describes an Indian language, Oḍia (Oriya), whose grammar includes a paradigm of overt functional Aktionsart morphemes distinct both from the lexical verbs they govern and select and from the tense/aspect morphemes which govern them in turn. This state of affairs is unexpected given previous work confining Aktionsart to the lexical vP domain. The Aktionsart markers in Oḍia are clearly functional and form a closed grammatical paradigm, but they are also verbal, as shown by the fact that they are separated from the main verb which they select by the same "verb linearizer" [-i] which is independently necessary in serial verb constructions involving two contiguous lexical verbs.

Oḍia has four Aktionsart morphemes. The assertion of a stative sleeping eventuality in the vP of (4) below is governed by the morpheme *-rah* (= stay), while the activity in (5) takes the morpheme *la:g* (= stick/continue/engage). (-i- indicates the verb linearizer (vl).) Activities need an agent; agentless (unaccusative) processes (*e.g.*, *the forest is burning*) take *ca:l* (= 'walk, move, continue'). Finally the "completive" morpheme *sa:r* ('finish') selects Accomplishments.

- (4) kukura-ta: gote ha:da coba -i- **la:g** -i- (a)ch -0 -i
 dog-class one bone bite vl **act** vl be Pres. Agr
 'The dog is (in the act of) biting a bone.'

- (5) kukura-ta: so -i- **rah-** -i- (a)ch -0 -i
 dog-class sleep vI **state** vI be Pres. Agr
 ‘The dog is (in the state of) sleeping.’

Oḍia also possesses a progressive morpheme *-u*, which, like progressive *-ing* in English, selects eventive but not stative predicates. Mahapatra shows, however, that the language lacks a marker of perfectivity. The morpheme *-i-*, which has been considered a perfective marker by earlier researchers, has in fact a variety of functions depending on the context. Adopting the “distinctness principle” (Richards, 2010) Mahapatra identifies *-i-* as a “conjunctive particle” inserted in Phonological Form (PF) in order to separate verbal elements which would otherwise be contiguous in syntax.

Unlike Tense and Agreement markers, Aktionsart markers are not obligatory in Oḍia. In the absence of such an eventuality-type marker, the inherent Aktionsart of the lexical verb determines its lexical aspect. Mahapatra also proposes that whenever a [+Dynamic] verb is immediately followed (structurally governed) by (the vI *-i-* plus) the [+Realis –Dynamic] Copula auxiliary *(a)ch*, the structure defines a Result State, equivalent to perfective aspect in a language like French. When a stative verb is immediately followed (governed) by (*-i-* plus) another stative verb, the Aktionsart construal is stative.

An Oḍia sentence may contain either an overt situation type marker or a progressive marker or both. In the latter case, the construction gets an iterative/frequentative meaning. This reading is acceptable with events and excluded with individual level predicates, because of the progressive marker, but it is compatible with stage-level stative predicates when accompanied by an intervallic temporal adverb.

- (6) dina bel-e kukura-ta: a:ma pinda: -upar-e
 In the day-time dog-class our veranda -on-loc
 so -i- **rah** -u -(a)ch-0 -i
 sleep vI STATE prog be-PRES -AGR.
 ‘In the day time, our dog sleeps on the veranda.’

On the basis of the data from Oḍia, Mahapatra makes a number of important claims:

- (i) Aktionsart classes may be identified by functional syntactic morphemes.
- (ii) Aspectual morphemes are not necessary to distinguish Aktionsart values like telic/atelic.
- (iii) Languages may differ as to the Aktionsart content selected by grammatical aspects. Mahapatra proposes that in Oḍia, Progressive Aspect selects a [+dynamic] vP, while in English it selects a [–telic] vP.

Mahapatra’s discussion of Oḍia Aktionsart markers is reminiscent of Laca’s (2002, 2005) work on periphrastic light verbs in the Romance languages. Laca

describes two classes of light verbs, aspectual light verbs like Habitual *soler* [+Gerund], Prospective *ir a* [+Inf.] in Spanish or Retrospective *venir de* [+Inf] in French, and eventuality modifiers like French *cesser de* [+Inf] or *commencer à* [+Inf]. The first group is higher in the tree structure than the second and is sensitive to tense distinctions; the second group is lower in the structure and, like the Aktionsart markers in Ođia, is sensitive to Aktionsart of the vP. The structural differences between the two groups shows up in the obligatory order of elements when verbs of both types are used, as in (7a) vs (7b).

- (7) a. Les cloches venaient de cesser de sonner.
 The bells come-IMPf P stop-INF P ring-INF
 ‘The bells have just stopped ringing.’
 b. *Les cloches cessaient de venir de sonner.

Romance even has filler elements like French *à* and *de* which may play a similar role to “conjunctive *-i-*” in Ođia (“Jean commence à/arrête de parler”) in separating V nodes. Since there are two such fillers, and they are selected by different matrix predicates, this may not be their only job, however.

Interestingly, English also has terms which function as optional Aktionsart markers like those in Ođia.

- (8) a. John is in a STATE of depression.
 b. (i) John is in the PROCESS of getting a divorce.
 (ii) The river is in the PROCESS of rising.
 c. John was caught in the ACT of stealing money.
 d. John is engrossed in the ACTIVITY of writing an article.

As in Ođia the nominal element must be suited to the Aktionsart of the eventuality the vP describes.

- (9) a. *John is in the STATE of stealing money.
 b. *John was caught in the ACT of living in London.

English also has Aspectual elements that select infinitives similar to those in Romance. English *used to* [+Inf] (used in past tense only) in (10) corresponds to Spanish *soler* [+Inf], while *have (just)* [+participle] corresponds to French *venir de* [+Inf] in (11).

- (10) a. John used to read a lot of books.
 b. Juan solía leer muchos libros.
 Juan used-to read-INF many books
 ‘Juan used to read a lot of books.’
 (11) a. John has just left.
 b. Jean vient de partir.
 Jean come P leave-INF
 ‘Jean has just left.’

Kayne (2003/2005) proposed that certain categorial terms belonging to Universal Grammar are overt in some languages and silent in others. Thus the contrasts between English and French in (12) and (13) point to the existence in English of silent category labels like YEARS in (12) and HOURS in (13) which correspond to overt terms in French.

- (12) a. John is three (YEARS OLD).
 b. Jean a trois ANS (*Jean est trois)
 *Jean has three YEARS (Jean is three)
- (13) a. – What time is it?
 – It is three (HOURS/O’CLOCK).
 b. Quelle heure est-il?
 Il est trois *(HEURES)
 It is three *(hours)

Kayne’s work suggests that eventuality modifiers like those which govern vP overtly in Ođia and aspectual periphrases which merge with tense in Romance may be available as optional vP classifiers in all languages, both in languages which have grammatical aspect, such as the Romance languages, and in those which lack aspect markers, such as English. VP Aktionsart classifiers are structurally lower than aspectual modifiers and bear more lexical content, just as nominal classifiers in Kayne’s examples are lower than grammatical number and have lexical content.

Marie Laurence Knittel’s article “Preverbs, aspect and nominalization in Hungarian” also contributes to advancing our knowledge of the interaction of Aktionsart and aspect in the sentential temporal calculus. Knittel shows that Hungarian preverbs contribute “boundedness” in both syntactic domains: they add telicity to the eventuality described in the vP domain and perfectivity to a telic event in the TP domain. Moreover, the same preverbs have both functions when a vP is nominalized by means of the suffixes *as/és*. Knittel’s study thus shows that deverbal nominalizations in Hungarian retain from their verbal base not only Aktionsart but also aspectual distinctions, thus providing evidence that grammatical aspect occurs in DP.

The effect of a preverb on the eventuality the basic vP describes depends on its lexical content. To an unergative activity verb like *sleep*, the preverb (*pv*) *el* adds an initial boundary, creating an inchoative event, as in (14). With a transitive activity with implicit object, the preverb *meg* adds a final boundary, deriving a telic achievement. In (15a) the verb takes the equivalent of “for x-time” adverbial, while in (15b), where vP is construed as an Accomplishment, the telic event can only take an “in x-time” adverbial.

- (14) a. Péter alud -t.
 Peter sleep -past-3sg.
 ‘Peter slept.’

- b. Péter **el** -alud-t.
Peter fall asleep-past -3sg.
'Peter fell asleep.'
- (15) a. Dolgoztam
work-past-1sg.
'I worked/was working.'
- b. **Meg** -dolgoztam.
PV -work-past-1SG.
'I did my work.'

Preverbs modify “outer (grammatical) aspect” as well as “inner (lexical) aspect”. A preverb on a telic vP with quantized direct object derives perfective aspect. Whereas telicity implies a final bound to a described event, perfectivity asserts that the final bound has been reached at the Reference Time. Following Knittel & Forintos-Kosten (2002), Knittel proposes that an Aspect Phrase located between vP and TP in the syntactic skeleton, contains the preverb adjoined to the root V bearing a [+B(ounded)] feature which modifies the Aktionsart of the lexical vP it governs. The authors proposed two other functional categories above AspP: VoiceP which contains the external argument of transitive and unergative verbs, and a second still higher AspP2, whose [+B(ounded)] feature contributes grammatical perfectivity.

In the second part of her contribution, Knittel argues that preverbs, which are maintained along with the verbal root in deverbal nominalizations formed by *-as/és* in Hungarian serve the very same telic Aktionsart and perfective aspectual functions as in the underlying verbal structure. The contextual elements which distinguish telic from atelic events and states in vP, such as the choice of appropriate temporal adverb, also apply in nominalizations. In the absence of a preverb, a transitive vP is construed as imperfective and pluractional or habitual. With a preverb the same sentence is perfective: it denotes a single event occurring at a single point of time.

Knittel proposes that the semantic functions are retained in a nominalization because its identifying categorial *n*- node dominates both Aspect Phrases in addition to the basic lexical vP. Knittel maintains, however that nominalizations lack a Tense Phrase. Whereas verb and preverb can be separated in a sentence, where V raises to T, leaving the preverb behind in a nominalization, no separation of V and preverb is possible. On one hand, this is expected, since a DP is an island for extraction (at least in the absence of a Komp (= DP Comp) node (*cf.* Szabolsci, 1983)). On the other hand, the claim is problematic. In a sentence, grammatical aspect merges with Tense. It is not clear whether aspect in a nominalization merges with a comparable node in DP or if perfectivity in DP is somehow distinct from the same aspect in TP.

While Hungarian and Slavic languages like Russian have verbal affixes which denote both telicity in vP and perfectivity in a higher syntactic position,

Knittel notes some differences between the aspectual role of preverbs in Hungarian and particles in Russian. For one thing, Russian has two different types of grammatical aspectual affixes, namely the telic-perfective particles and the imperfective suffix, which can combine, while Hungarian has only one set of preverbs located in either of two available syntactic positions. In Corre's chapter (below) we will see that the telic-perfective particles in Russian can be given a different semantic analysis.

Monika Schulz's article "Causer, recipient and possessor: the grammatical subject of *get* and the context-sensitivity of P_{HAVE} " explores the grammaticalization of aspect as part of the diachronic process that yielded modern stative possession HAVE GOT from a perfect structure whose semantics was that of an event of coming to possess. In the older form, there is a conversational implicature of stative possession: if one has come to possess something, and nothing else intervenes, normally one is assumed to still possess it. Whereas this implicature can be cancelled in *have got(ten)*,¹ in HAVE GOT it cannot be: *have got(ten)* makes reference to the consequent state of the event described by the vP, while HAVE GOT involves a present stative possessive meaning. Schulz argues that this conventionalization of an aspectual meaning that has formerly only been conversationally implicated has structural consequences; indeed, this change in meaning is central to the structural changes observed through the development from *have got(ten)* to HAVE GOT.

Following Giorgi & Pianesi (1997), Schulz proposes that the denotation of the T2/Asp (viewpoint aspect) projection makes reference to a consequent state. However, in the case of HAVE GOT, Schulz proposes, the conventionalization of the present possessive meaning as the meaning of the vP entails that the T2/Asp projection is dropped, since its meaning is now incompatible with the present stative possession meaning expressed at the vP level. In this way, the lack of semantic link between HAVE and GOT entails that the normal head movement of *have* is not possible, "the loss of the relationship between Agr/T1 and T2/Asp renders Agr/T1 defective in some sense."

This proposal accounts for the fact that HAVE GOT behaves structurally in some ways like a present perfect (*i.e.*, like the original *have got(ten)*), and in other ways like present tense with stative Aktionsart. For example, HAVE in HAVE GOT continues to behave like an auxiliary verb in its behavior with respect to negation and person agreement, as in (16):

1. This point assumes that the "experiential reading" (Iatridou, Anagnostopoulou and Izvorski, 2001) of *have got(ten)*, as in *John has got(ten) several cars in his lifetime (but right now he does not have a single one)* is not a separate reading; it is merely what happens when one cancels the implicature that the consequent state still holds.

- (16) a. We haven't gotten any cheesecake.
 b. *We don't have got any cheesecake.
 Quirk *et al.* (1985: 131-132).
 c. John has got a car.
 d. I have got a car.

On the other hand, HAVE is defective in being incompatible with non-finite tense (and in standard dialects, past tense as well):

- (17) a. ?She may have got plenty of money but that doesn't mean she can push us around.
 b. %One bloke had got a trumpet.

Schulz suggests that the reason that the latter properties disappear is that they require T2/Asp. Thus the disappearing properties are associated to T2/Asp, while the retained properties are not.

We can consider Schulz's proposal in a more general context (see also Diewald, 2002, *e.g.*). A form with a conversational implicature comes to have that implicature conventionalized. The conventional(ized) implicature is in conflict with the historical meaning, which leads to a semantic incompatibility, triggering defective syntax and thus a hybrid, frozen form.

- (18) conversational implicature → conventionalization → incompatibility → defectiveness → hybrid form

At each causal link, an interesting question here is whether the next step is inevitable or not. For example, the existence of a conversational implicature may but need not entail that conventionalization will happen. The final link as well is relatively clear; defectiveness, on this theory, should lead inexorably to the hybrid syntactic behavior observed in HAVE GOT. But we can ask whether conventionalization of a meaning is always expected to lead to incompatibility between two parts of a phrase structure. And if there is such incompatibility, will the speaker always end up with a defective item—in effect, choosing to retain a sort of compositionality while giving up lexical (or categorical) coherence?

The historical development of the French *passé composé* from a perfect meaning to a past perfective meaning provides a counterpoint to the case of HAVE GOT. It is similar in that the original meaning is that of a compound tense, *i.e.*, a perfect, and the eventual development is to that of a simple tense. The *passé composé* is different, however, in that the new meaning is that of the past event occurring.

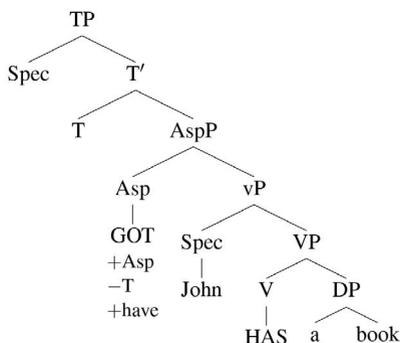
It is interesting to consider Schulz's hypothesis that the semanticization or conventionalization of a conversational implicature can trigger syntactic changes in light of the Minimalist Program (Chomsky, 1995). A fundamental hypothesis of this program is that Syntax is an autonomous component of

the grammar while Semantics (and Pragmatics) are interpretive components. Semantics and pragmatics may reject otherwise well-formed syntactic structures, as with “colorless green ideas sleep furiously” (Chomsky 1969) but they cannot interfere with a derivation to influence them. According to the Minimalist Program (Chomsky 1995), syntactic structures are derived by Merge and Move operations on formal features combined with the lexical content of lexical items. Only a change in a formal features can effect a change in syntactic structure.

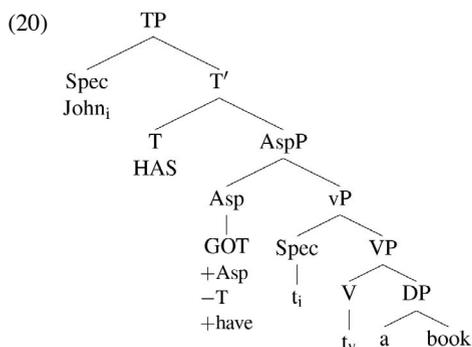
There is no model of diachronic change proposed in the Minimalist Program. Indeed, if syntax is, by hypothesis, a perfect computational system, it is not immediately clear why it would change at all (Lightfoot, 1999; Roberts & Roussou, 2003). In this vein Longobardi (2001) argues for a restrictive principle of syntactic change—still in the spirit of the Minimalist Program—wherein syntactic change does not arise unless it is caused by changes in semantics or phonology. Schulz’s proposal fits very well in this framework, as in her proposal it is precisely semantic change that provokes a change in morphosyntactic structure.

Schulz’s analysis of the syntactic structures involved in the change from *have gotten* to *have got* opens the door to an alternative hypothesis, however. Schultz proposes that the loss of the ASP/TP2 projection in the original complex participial structure was crucial. But what triggered this loss? May we not hypothesize, that it was the optional loss of the suffix EN on GOT in the phonology, itself motivated perhaps by the lexical content of the verb, which then triggered or accompanied the loss in syntax of the participial, even verbal, status of GOT? Without a verbal suffix which bears a Tense feature a lexical item is no longer a verb and can therefore not project a participial TP2 projection. Still, GOT without the Tense feature retains both its semantic content, which includes that of HAVE, and its inchoative aspectual feature. These features would allow GOT to raise to or be inserted in an Aspect Node available in Universal Grammar located between T and v. The result would be a kind of serial verb construction: GET+HAVE as in (19).

(19)



Although GOT+HAVE has the semantics of a serial verb structure, CHANGE OF STATE+NEW STATE, one may object that the superficial structure is not *got-have*, but rather *have-got*. The superficial order would be derived by obligatory raising operations: if *got* is no longer construed as a verb, then it lacks a Tense feature, and *John* must raise from Spec vP to Spec TP to check its person feature with T, while *have* must raise to T to check its Tense feature. Now the structure no longer means “GOT (inchoative event) then HAVE (state)” but it instead denotes a state of possession located at the endpoint of an extended present time interval.



Lovers of English grammar will recognize in structure (20) a close parallel to other English structures in which a verbal root lacking a Tense feature functions as an aspectual operator sandwiched in between a tensed auxiliary verb above it and a lexical verb below it, also forming a serial verb structure:

- (21) a. John will COME SEE me. (inchoative + event)
 b. I can GO VISIT you. (inchoative + event)

Schulz's analysis shows a redundancy between the HAVE (= possession) content of GOT and that of HAVE itself. Perhaps it is this redundancy of lexical content which triggered both the phonological loss of EN in the participle and the loss of the Tense feature in GOT. In (20) the HAVE content of GOT contributes the lexical content which possessive HAVE lost when it converted to a temporal auxiliary by raising to TP.

The moral of this alternative story would be that semantics does not in fact change syntax, but that the Grammar reduces feature-redundancy whenever it can do so without losing lexical content. The change from GOTT(EN) verbal participle to GOT as aspectual operator removed the Tense feature of GOTTEN which is not necessary in a simple sentence with finite HAVE. But, like the COME and GO operators, GOT keeps its inchoative aspect feature. It also retained the lexical content which HAVE loses when it functions as a

tense operator. Thus the final structure (20) is not F-redundant and it preserves lexical content.

In “Preverbs in Russian: situation or viewpoint aspect?”, **Eric Corre** tackles the difficult problem of accounting for the fact that Russian preverbs are both lexical and functional. That is, preverbs, derived from Prepositions, contribute to two types of Aspect. They determine Situation Aspect, also called Inner Aspect or Aktionsart, by changing the event structure of an underlying IMPF root verb, marking the verb as telic. They may also change the meaning of the verb, thus creating a new lexical item. In this case, the derived telic verb may be *detelicized* by the addition of a suffix *-a/-iva/yva*, thus creating an IMPF/PF pair. The process is shown in (22).

- (22) a. byt' (beat, hit) IMPERFECTIVE (IMPF)
 b. ubit' (kill (a man)), razbit' (break (a glass), etc. PERFECTIVE (PF)
 c. ubivat', razbivat', etc. SECONDARY IMPERFECTIVE (SI)

Preverbs also determine Outer Aspect or the way in which an event is placed in time. Given an Assertion Time Span, if V is Perfective, then both boundaries of the event are included in the Time Span; if V is Imperfective, the event occupies the entire Time Span (and by implication may extend beyond it).

Traditionally, there are three types of Russian preverbs which merge with an IMPF base verb:

- I. Meaning modifying lexical preverbs which derive new verbal roots and undergo secondary imperfectivization (SI) as in (22a-c) above.
- II. Purely perfectivizing lexically empty preverbs which make the atelic IMP root verb telic without changing its meaning. These are not subject to SI.
- III. “Superlexical” preverbs which take an activity verb as input and impose a temporal or quantificational limit on the activity, as in (22b-c). These may or may not undergo SI.

The three types of preverbs are exemplified as in (23):

- (23) I. Base IMPF verb: byt' (beat) – PF ubit' (kill) (22b)
 II. Base IMPF verb: pisat' (write) – PF napisat' (write)
 III. Base IMPF verb: krichat' (shout) – **zakrichat'** (ingressive: start to shout); **pokrichat'** (delimitative: shout for a while); **nakrichatsya**: (cumulative: shot a lot), etc.

It has been largely assumed that the function of the preverbs is to make an atelic verb telic. Filip (2005, 2008) argued against this claim. For Filip, telicity is provided by a maximality operator that maps sets of partially ordered events onto maximal events; this operator is crucially not part of the meaning of the prefix but is rather introduced separately. Filip points out that the adverb

test “in x-time” which tests for telicity fails with certain superlexical preverbs, in particular with the delimitative use of the preverb *po* as in (23) (III) above.

- (24) Petja **pochital** knigu polchasa / *za polchasa
 Petja read from the book for half-an-hour / *in half-an-hour

Corre challenges the identification of telicity with event maximalization. He reexamines the question of whether the prefix merely characterizes the scale, as Filip argues, or in fact carries telic meaning. Building on Borer (2005), Corre distinguishes atelicity, which is both cumulative and divisive, as in *read books*, from telicity, which may correspond to non-divisiveness alone as in *read many books*. Corre argues that even if delimitative *po* does not encode lexical telicity, that is, the presence of an inherent culmination in a verb’s denotation, it introduces what he calls, following Paduceva & Pentus (2008) and Mehlig (2008), *terminativity*, a “semantics of the end”. That is, the activity stops, even when the verb does not imply a natural telos. Corre demonstrates that given the definition of telicity as “terminativity” rather than maximalization, all Russian preverbs can be understood as introducing telicity.

Corre also shows that both perfective and imperfective verbs can derive a perfective viewpoint. In (24), for example with IMPF verbs, both boundaries of each event are included in the time span *yesterday*.

- (25) Vchera, Masha gotovila, sterala bel’e i smotrela televizor.
 IMPF IMPF IMPF
 Yesterday, Masha cooked, washed clothes and watched TV.

Corre concludes that what is grammaticalized in Russian is situation aspect not viewpoint aspect; viewpoint aspect is only inferred compositionally from clues provided by the context.

Corre’s analysis has an important consequence for the study of grammatical aspect in general. The definition of perfective and non-perfective verbs in *e.g.*, Germanic and Romance languages has its roots in traditional grammars of Slavic aspect. It has been claimed for instance, that in English, the Progressive form illustrates IMPF aspect, while the simple past is Perfective. But if in fact perfectivity is not “grammaticalized” in Russian, in the sense that the semantics of perfectivity does not correspond to any dedicated morphosyntactic element of the grammar, can we still claim that it is grammaticalized in that sense in other languages in which aspect has been constructed on the Russian model? Note that in this volume Mahapatra as well as Corre asserts that perfectivity does not correspond to any one dedicated morpheme in the language he studies. Perhaps only telicity can be grammaticalized, that is, can correspond to a dedicated functional morpheme (often of prepositional origin); while Perfectivity, which inserts a bounded event in the Reference Time interval, has a variety of sources. It may be

imposed by telic morphemes on the verb as in Russian or Hungarian, or by tense/aspect affixes as in the *Passé Simple* or *Passé Composé* in French, or it may be derived in context at the syntax-semantics interface, even in sentences with IMPF verbs as in Russian (25) above or the “Imperfective of Rupture” in French sentences like *Deux heures plus tard, Jean tombait du train* (‘two hours later, John fell-IMP from the train’).

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