Aspectual composition in structurally deficient clauses

Sergei Tatevosov

Moscow State University

Goals. Theories of aspectual composition (AC), specifically, Krifka's (1989, 1992, 1998) mereological theory, Verkuyl's (1972, 1993 and elsewhere) PLUG^{+} theory, Hay et al.'s (1999) theory of scalar structure, Rothstein's (2004) atomicity theory explain how telicity of verbal predicate is derived by combining information that comes from the verb and from its argument(s). It has been widely recognized (Verkuyl 1999, Krifka 1992, Filip 1993/1999, 2005, Filip & Rothstein 2006, a.o.) that languages fall into two types as to properties of AC, which I refer to as English-type AC and Slavic-type AC. In this paper, I present evidence that this distinction only exists at the level of fully inflected clauses, while at the *v*P/VP level languages uniformly exhibit English-type AC. (In what follows I assume Krifka's mereological theory. Problems for this theory discussed by Zucchi & White 2001, Rothstein 2004, a.o., do not affect my line of argument.)

AC in fully inflected clauses. In languages with English-type AC, cumulativity/quantization status of incremental arguments determines that of verbal predicates, as in (1a-b).

(1) a. John ate an/the apple ??for ten minutes/in ten minutes. <telic, quantized argument>
b. John ate soup/apples for ten minutes/*in ten minutes. <atelic, cumulative argument>

As for Slavic-type AC, the common assumption (e.g., Piñon 2001, Paslawska & von Stechow 2003) is that the argument does not determine telicity of a verbal predicate, but, the other way round, the semantics of verb restricts interpretation of the argument. In (2a) from Russian, the prefixed perfective verb *napisat'* can only yield a telic predicate, while its argument must have what Filip (2005 and elsewhere) calls unique maximal interpretation (UMI) whereby it refers to a maximal individual consisting of all entities of a particular type available at the universe of discourse, cf. (2b). This pattern of AC is attested in other languages as well, see (3) from Tundra Nenets (Uralic).

(2) a. Vasja *na-pisa-l* pis'm-a (za dva čas-a) || *(dva čas-a)...
Vasja PRF-write-PST:M letter-ACC:PL in two-ACC hour-GEN two hour-GEN
1. 'Vasja wrote all the letters (in two hours).' <telic, quantized argument>
2. *'Vasja wrote letters (for two hours).' <telic, cumulative argument>
b. #... no ostalos' ešče neskolko.
'but he still has to write a few (more letters)'. <no letters not involved in the writing event>

(3) pida pʲisʲmu tola. #nʲaxar pʲisʲmo-da xaji.
he letter.ACC.PL read.PST three letter-3SG remain
'He wrote (all the) letters.' <telic, quantized argument> 'Three letters are (still) left (to write)'.

AC in structurally deficient clauses. I argue that at the *v*P/VP-level, Slavic-type AC does not exist. To show this, I adopt the strategy Kratzer (2003) offers for treating Zucchi's (1999) problem of indirect access: look at structurally deficient clauses (SDCs), i.e., at constructions that lack some of the clausal functional structure. I examine two types of SDCs — nominalizations and constituents embedded within syntactic causatives (e.g., Harley 2006 and references therein). Since SDCs contain at least the same vPs/VPs as fully inflected clauses, but possess less functional structure above *v*P, as shown in (4), they provide a more direct access to the properties of uninflected *v*Ps/VPs.

(4) a. Finite clause: [… [$_{TP}$ [… [$_{AspectP}$ […[$_{vP}$ [… [$_{VP}$ […]]]]]]
b. Nominalization: [$_{NP}$ [$_{N'}$ NMN [… [$_{vP}$ [… [$_{VP}$ […]]]]]
c. Syntactic causative: [… [$_{TP}$ [… [$_{AspectP}$ […[$_{vP}$ CAUS [$_{vP}$ [… [$_{VP}$ […]]]]]]

where NMN is a nominalizing morpheme, CAUS is a causative, structure that fully inflected clauses share with SDCs is circled

Therefore, if we only find English-type AC in SDCs, this signals that Slavic-type AC does not exist at the *v*P/VP level. Here I show that this is exactly what happens with nominalizations in Russian and syntactic causatives in Nenets.

In (5), a deverbal noun *napisanije* occurs, derived from the same verbal stem as in (2).

(5) a. [*Na-pisa-ni-e* pisem] zanja-l-o dva čas-a.
PRF-write-NMN-NOM letters.GEN take-PST-N two hour-GEN
'Writing *all the* || *∅ letters took two hours.'

b. Ja celyj den' ne vyxodi-l iz dom-a, zanima-ja-s' [*na-pisa-ni-em*
I whole day not come.out-PST from house-GEN occupy-CONV-REFL *PRF-write-NMN-INSTR*
pisem]. OK Na zavtra osta-l-o-s' ne ochen' mnogo.
letters-GEN on tomorrow remain-PST-N-REFL NEG very many
'I did not leave home for the whole day, engaged in writing [∅|| **all the*] letters. Not so many (letters) are left for tomorrow'

Unlike in (2a), however, in (5) the writing event can be conceived of as telic, (5a), and atelic, (5b). Crucially, in (5b), the argument NP 'letters' has the bare, not the unique maximal interpretation; denying explicitly that all the letters participate in the writing event does not yield contradiction. Telicity in (5a) implies unique maximal interpretation ('all the letters'), as usually. Therefore, AC in Russian nominalizations is the same as in English clauses in (1).

In Nenets, an SDC is a *v*P denoting caused event (circled constituent in (4c), bracketed in (6)) embedded within the syntactic causative:

(6) a. man^{j} [$_{vP}$ s^{j}id^{j}a čas-xana pet^{j}a-nʔ p^{j}is^{j}mu tola]-pte-ja-n.
I two hour-LOC P.-DAT letter.ACC.PL read-CAUS-SFS-1SG
'I made Peter read (all the || *∅) letters in two hours.'

b. man^{j} [$_{vP}$ s^{j}id^{j}a čas pet^{j}a-nʔ p^{j}is^{j}mu tola]-pte-ja-n.
I two hour P.-DAT letter.ACC.PL read-CAUS-SFS-1SG
'I made Peter read (∅ || *all the) letters for two hours.'

As (6a-b) show, the predicate 'Peter write letters' can yield both telic and atelic interpretations, and this again correlates with the interpretation of incremental argument in a way characteristic of English-type AC. Crucially, in (3) a corresponding fully inflected clause is obligatorily telic, and its incremental argument is obligatorily quantized.

Outline of the analysis. In Russian and Nenets, undetermined NPs of predicative type <e,t> can be shifted freely into one of the appropriate argumental types by type-shifting operators. The result of their application are DPs that denote individuals (of type *e*) or generalized quantifiers (of type <<e, <s, t>>, <s, t>>). Specifically, two type-shifters available in Russian and Nenets are ∃ (i.e., $\lambda P \lambda R \lambda e \exists x[P(x) \wedge R(x)(e)]$) and σ (i.e., $\lambda P \sigma x.P(x)$), where σxPx denotes the maximal element in the extension of P in the sense of Link 1983. Applying ∃ and σ to the denotation of cumulative NPs like 'letters' yield DP denotations $\lambda R_{<e,\ <s,t>>} \lambda e \exists x[\text{letters}(x) \wedge R(x)(e)]$ and $\sigma x.\text{letters}(x)$, respectively. After merging these DPs in the internal argument position, introducing the external argument via Event Identification (Kratzer 1996), and QRing the generalized quantifier, we get *v*P denotations in (7):

(7)a. || [$_{vP}$ P. read [$_{DP}$ ∃ letters]] || = $\lambda e \exists y[\text{agent}(\text{Vasja})(e) \wedge \text{eat}(y)(e) \wedge \text{letters}(y)]$
b. || [$_{vP}$ P read [$_{DP}$ σ letters]] || = $\lambda e[\text{agent}(\text{Vasja})(e) \wedge \text{eat}(\sigma x.\text{letters}(x))(e)]$

(7b) is quantized, hence telic, since no part of an event in which the maximal entity that falls under the denotation of 'letters' is read is an event in which the same entity is read. (7a) fails to be quantized, since any part of an event in which some letters are read is an event in which some (smaller part of) letters are read, down to individual letters. If it is *v*Ps like (7a-b) that are embedded under the nominal morphology in (4b) and under the causative morphology in (4c), this explains telic and atelic interpretations in (5a)/(6a) and (5b)/(6b). The fact that at the *v*P/VP-level aspectual composition is always English-type follows.

Now assume that *v*Ps like (7a-b) continue projecting a clause in Russian and Nenets. At some point of derivation vP merges with the aspectual head Asp, as represented in (8).

(8) a. Finite clause: [… [$_{TP}$ [… [$_{AspectP}$ DEFAULT ASP… […[$_{vP}$ [… [$_{VP}$ …]]]]]

At this point, I assume a version of Bohnemeyer and Swift's (2004) default aspect theory. I do not have space to present this theory in detail, but its basic tenet is: telic predicates come out perfective, atelic predicates imperfective. The theory thus offers an explanation why perfective finite clauses in (2)-(3) are obligatorily telic and why their incremental argument receives UMI: perfectivity comes along with telic predicates in (7b), not with atelic predicates in (7a). The difference between languages with English-type AC and Russian-type AC is thus as follows. In languages like English, DPs cannot go without overt determiners, so aspectual ambiguity is minimal at the VP-level already. In languages like Russian/Nenets, where DPs can lack overt determiners, the ambiguity is not minimized at the VP level: this only happens at the level of functional structure dominating *v*P, where the default aspect does its job.

Conclusion. Evidence from SDCs (nominalizations and syntactic causatives) suggest that at the *v*P/VP level aspectual composition in languages like English and Russian/Nenets works in exactly the same way. The difference between languages comes at later stages of syntactic derivation, when functional (specifically, aspectual) structure is projected.

SELECTED REFERENCES. **Filip, H.** (2005). The Telicity Parameter Revisited . In *Semantics and Linguistic Theory (SALT) XIV*. Ithaca: CLC Publications, Cornell University. **Kratzer, A**. (2003). *The event argument and the semantics of verbs.* Ms. UMass-Amherst **Krifka, M.** (1998). The origins of telicity. In S. Rothstein (ed.) *Events and Grammar*. Dordrecht: Kluwer, 197-235 **Verkuyl, H. J.** (1993). *A Theory of Aspectuality.* Cambridge: CUP. **Bohnemeyer, J., M. Swift** (2004) Event realization and Default Aspect: *Linguistics and Philosophy* **27:** 263-296