

Changing the perspective on passives

Berit Gehrke (berit.gehrke@let.uu.nl)*, Nino Grillo (nino.grillo@let.uu.nl)*⁺
*Utrecht Institute of Linguistics OTS, ⁺University of Siena

1 INTRODUCTION: EVENT STRUCTURE BASED PASSIVES

- movement of a stative subevent of a structurally complex event to a discourse-related position to the edge of νP is the fundamental characteristics of passive constructions
- passivisation as an operation on the event structure, a predication on a consequent state (a result or an inchoative state) of the event, anchoring the event time within this state subevent
- a semantic requirement, some kind of topicalisation, singles out the consequent state and assigns it a feature that will determine its movement to a discourse-related projection at the edge of the νP phase (~ Belletti's 2000 low focal projection)
- the edge between the verbal phrase and the temporal domain of the clause is essential for legibility

2 ARGUMENT STRUCTURE BASED ACCOUNTS OF PASSIVE CONSTRUCTIONS

2.1 GB approaches

External argument still present in verbal passives (Jaeggli 1986, Roberts 1987, Baker et al. 1989, among others; see also Collins 2005):

- Strong Crossover effects (1) a.
- availability of subject-controlled infinitival clauses (1) b., subject-oriented modifiers (1) c.
- depictives (1) d., binding (1) e./f., purpose-clauses (1) g.

- (1) a. *They_i were killed by themselves_i.
b. The book was written to collect the money. (Manzini 1980)
c. The book was written deliberately. (Roeper 1983)
d. The book was written drunk. (Baker 1988)
e. Damaging testimony is always given about oneself in secret trials. (Roberts 1987)
f. Such privileges should be kept to oneself. (Baker et al. 1989)
g. The book was written on purpose.

passive participle morphology is external argument (Baker et al. 1989)

- *-en* passive participle morpheme is a clitic base-generated in I°
- this clitic is lowered down in the further derivation to adjoin to the verbal stem to “absorb” the case assignment capacity of the verb

Problems:

- Arbitrary differentiation of past and passive participle
- How does NP in *by*-phrase receive its theta role?
- Not in conformity with the UTAH (Baker 1988)

2.2 Collins' (2005) smuggling approach

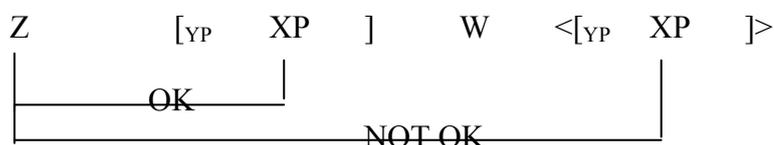
- passive morphology does not absorb external theta role or accusative case
- external theta role is assigned in Spec ν P in line with UTAH
- Accusative Case is checked by the *by*-phrase in Voice^o directly above ν P

problem: locality

Collins' solution: 'Smuggling' of the VP over the ν P makes the internal argument the closest to Spec TP allowing for its 'promotion' to subjecthood without any violation of Relativised Minimality or its derivational counterpart.

(2) Smuggling:

Suppose a constituent YP contains XP. Furthermore, XP is inaccessible to Z because of the presence of W, some kind of intervener that blocks any syntactic relation between Z and XP. If YP moves to a position c-commanding W, we say that YP smuggles XP past W.



participle phrase moves to the left of the *by*-phrase dragging along the internal argument

Evidence for XP-movement analysis against head movement analysis:

- (3) a. The coach summed up the argument.
 The coach summed the argument up.
 b. The argument was summed up by the coach.
 *The argument was summed by the coach up.
- (4) a. John was spoken to by Mary.
 b. *John was by Mary spoken to.

Problems:

- What is the status of smuggling in the theory?
 - Is smuggling movement? And if so how is it triggered, i.e. what is the trigger for this movement?
 - What are the limits of smuggling and more generally of look-ahead computations? Doesn't it massively over-generate? Can it be used to avoid other potential interveners, for example in A'-movement?
 - How do we explain sentences like (5), where passivisation applies independently from movement of the internal argument to the subject position?
- (5) There was a man killed.

3 FROM ARGUMENT STRUCTURE TO EVENT STRUCTURE - SHIFTING THE PERSPECTIVE ON PASSIVES

3.1 Background assumptions

- **events are structurally complex and involve more than just one subevent** (Moens & Steedman 1988, Pustejovsky 1991, Higginbotham 2000, Ramchand 2005)
- **event structure itself is crucially atemporal in nature** (see appendix)
 - no times associated with any of the subevents
 - no immediate link between (atemporal) event and temporal domain of the clause

Pustejovsky (1991)

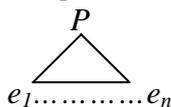
- (6) **State (*S*)**: a single event, which is evaluated relative to no other event

Examples: *be sick, love, know*



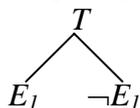
- (7) **Process (*P*)**: a sequence of events identifying the same semantic expression

Examples: *run, push, drag*



- (8) **Transition (*T*)**: an event identifying a semantic expression, which is evaluated relative to its opposition (with *E* as a variable for any event type)

Examples: *give, open, build, destroy*



Higginbotham (2000)

Accomplishments (in the sense of Vendler 1957) are syntactically represented by ordered pairs of positions for events – TELIC PAIR FORMATION $\langle E, E' \rangle$

- (9) I flew my spaceship to the morning star.
 fly (I, my spaceship, *e*) & to (the morning star, (*e, e'*))
- (10) They arrived at the airport.
 arrive (*x, e*) \leftrightarrow ($\exists p$) [*at(x, p, e)* & ($\exists e'$) (*e'* is a journey by *x* & (*e, e'*) is a telic pair)]
- (11) *kill* (*x, y, <e, e'>*) is defined by *P(x, <e, e'>)* & *e'* is a death of *y*

Hoekstra (1992, 1994, 1999)

- Small clause (SC) analysis for all change of state or position verbs, also where no overt secondary predicate is visible
 - SC complement denotes the (path towards an) end-state of the (deep) object (the internal argument)
- (12) V [_{SC} DP ... PRED]

3.2 Proposal

passivisation involves promotion of a consequent state subevent of a complex event

- a consequent state (result or inchoative state) is represented as a small clause (SC) predicated over the internal argument DP, which is in the specifier of this SC
- SC moves to a position above vP in passive constructions
- this position is independently needed to form a basis for the event time that subsequently serves as the internal argument of Asp° (in the sense of Demirdache & Uribe-Etxebarria 2000) (see appendix)
- In passive constructions, the event time falls within the consequent state subevent

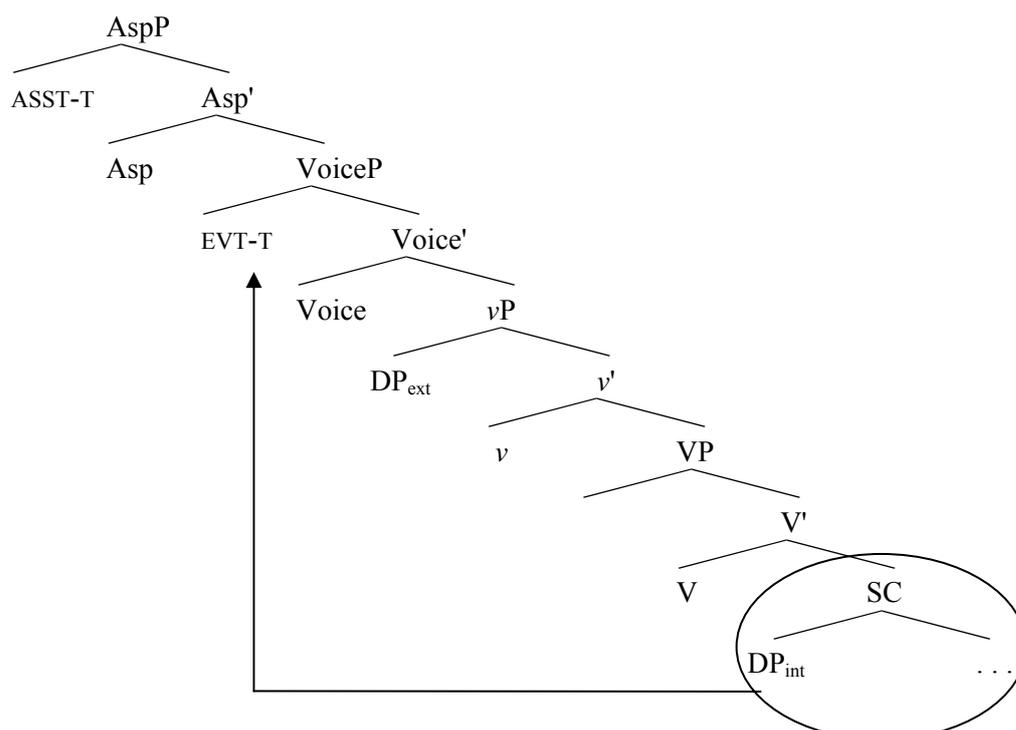
the particular projection that the SC moves to has two properties:

- the discourse-related part chooses the element that needs to be singled out
- the quantificational part makes it readable

main job of this feature:

- single out an element of the atemporal event structure (a consequent state in passive constructions, which is a small clause predication over the internal argument)
- enrich its semantics by introducing temporality
- ground the event time within the event in a particular way
- making the selected (sub)event available to temporal domain (& ultimately discourse domain) of the clause

(13) **event structure embedded under clausal structure**



4 EMPIRICAL EVIDENCE

4.1 Consequent states in passive constructions

- (14) a. The argument was summed **up by the coach**. (= (3), Collins 2005)
*The argument was summed **by the coach up**.
b. John was spoken **to by Mary**.
*John was **by Mary** spoken **to**.
- (15) a. The table was wiped **clean by John**. (from Postal 2004)
??The table was wiped **by John clean**.
b. The metal was hammered **flat by John**.
??The metal was hammered **by John flat**.

- The consequent state, structurally represented as a SC, moves taking along particles in verb-particle constructions (14) a., *to*-phrases in ditransitives (14) b., or resultatives (15)
- (such) particles, goal prepositions and resultatives are the predicative heads of the SC

4.2 Not all transitive verbs can form passives (cf. e.g. Postal 2004)

transitive verbs involving telic predicates can (16), those involving atelic ones cannot (17):

- (16) a. The lion **killed the antelope**.
The antelope was killed (by the lion).
b. He **put the card** on the table.
The card was put on the table (by him).
- (17) a. This laptop **weighed two kilos**.
***Two kilos were weighed** (by this laptop).
b. This chair **cost 50 euro**.
***50 euro were costed** (by this chair).

- such transitive verbs never have a resultative or inchoative reading and can never be part of an event structure containing a consequent state

4.3 An apparent problem: passives involving stative predicates

- (18) a. The house is **owned / surrounded** by the army.
b. The answer / myth is **known / believed** by the pupils.
c. Max was **loved** by Mary.
- (19) a. The news **worried / surprised / excited** Max.
b. Max was **worried / surprised / excited** (by the news).

Belletti & Rizzi (1988): different kinds of **psych-verbs**

worry-verbs can undergo passivisation, *appeal*-verbs cannot (examples from Reinhart 2002):

- (20) a. The solution **appeals** to me / **escapes** me.
b. *I am **appealed / escaped** (by the solution).

intuitive difference: inchoative reading of the state denoted by the verb available with verbs in (18) and (19) but not with verbs in (20)

- *worry*-verbs can have an inchoative meaning of the state denoted by the psych verb (e.g. *Max got into a worrying state*)
- *appeal*-verbs cannot (e.g. **I got into an escaping state*)
- only verbs that allow reading where the state denoted by the verb is a kind of consequent state predicated over the internal argument, allow passivisation (see also Pesetsky 1995 on the relation between *venire/COME*-auxiliary and eventive reading in *worry*-passives)

4.4 Ditransitives

- (21) a. John **sold** a radio **to Mary**.
 John **sold Mary** a radio.
 b. John **bought** a radio **for Mary**.
 John **bought Mary** a radio.
- (22) a. A radio was **sold to Mary**. (Postal 2004, citing Fillmore 1965)
 Mary was **sold** a radio.
 b. A radio was **bought for Mary**.
 ***Mary** was **bought** a radio.

assumption: only goals can participate in telic pair formation, benefactives cannot (but see Tungseth 2006 for a different treatment) – consequent state SC only available with goals

4.5 Floating quantifiers

floating Qs banned from post-verbal position in passives (unexpected under previous approaches):

- (23) a. John gave the boys **both** a good talking to.
 John gave **both** the boys a good talking to.
 b. The boys were **both** given a good talking to.
 ***The boys** were given **both** a good talking to.
- floating Qs move together with internal argument and the SC headed by *to*; remain stranded there after movement of internal argument to Spec TP

4.6 Existential *there*-constructions

- (24) a. There was a man killed.
 b. ***There** was killed a man.
- regular passives involve 2 independent operations:
 - movement of consequent state SC to form a basis for the event time
 - movement of a DP to Spec TP to satisfy the EPP
- in *there*-constructions, 2nd movement does not take place (expletive insertion satisfies EPP)

4.7 On PRO as the external argument of short passives

similarities between silent (external) argument in short passives and PRO (Baker et al. 1989)
 only difference: first person available for PRO in active but not for silent argument in passives

- (25) a. PRO to shave ourselves is fun
 b. ***Love** letters were written to ourselves.

solution under present account: local relation between PRO and AgrS is disrupted in passives by intervention of the consequent state SC (on PRO in short passives see also Collins 2005)

- (31) **Agrammatic aphasia comprehension patterns** (see also Grodzinsky 2004, Drai and Grodzinsky 2006 and reference cited therein)

Above Chance Performance	Chance Performance
Subject relatives	Object relatives
Subject Clefts	Object Clefts
Actives	Passives
Adjectival Passives ²	Verbal Passives
Unaccusatives	Passives
SVO Hebrew Actives	OSV/OVS Hebrew Actives
Object Control	Subject Control
Unscrambled Object	Scrambled Object
...	...

6 SUMMARY & OUTLOOK

- shift of focus from an argument structure to an event structure based perspective on the formation of passives accounts for several syntactic and semantic properties of the passive construction, some of which remain unexplained under previous accounts
- more than the internal argument moves in passives (in the lines of Collins 2005)
- the position the consequent state SC moves to and the feature related to this movement constitute an example of edge-related syntax/semantics (legibility issue)
- movement of (part of) the atemporal and structurally complex event is necessary to single out an element of the first phase (in this case resP) and to enrich its semantics by introducing temporality and thus making it available to the next phase
- predictions for agrammatic Broca's aphasia are borne out
- strict Compositionality: semantics can be directly read off syntax

future research:

- **structure of participles: differences between passive and perfect participles**

both are morphologically identical in many languages

both constructions involve some resultative semantics

but: external argument in perfect tense constructions / internal argument in passive constructions promoted to subject position

- **acquisition of passives**
- **cross-linguistic research: is it always a consequent state SC that moves?**
- **implications for case**

² See Kratzer (2000) and Anagnostopoulou (2003) on the difference between adjectival and verbal passives

REFERENCES

- Anagnostopoulou, Elena (2003). Participles and voice. In Alexiadou, Artemis, Monika Rathert and Anrim von Stechow (eds.). *Perfect Explorations*. Berlin: Mouton de Gruyter.
- Arsenijević, Boban (2006). *Inner Aspect and Telicity. The decompositional and quantificational nature of eventualities at the syntax-semantics interface*. Utrecht: LOT.
- Baker, Mark (1988). *Incorporation*. Chicago University Press, Chicago.
- Baker, Mark, Kyle Johnson and Ian Roberts (1989). Passive argument raised. *Linguistic Inquiry* 20.2, 219-251.
- Belletti Adriana (2000). *Aspects of the low IP area*. Ms. University of Siena.
- Belletti, Adriana (2003). *Handouts of the Siena lectures 2002-2003*.
- Belletti, Adriana and Luigi Rizzi (1988). Psych-verbs and θ theory. *Natural Language and Linguistic Theory* 6, 291-352.
- Borer, Hagit (2005). *Structuring Sense. Volume I: In Name Only / Volume II: The Normal Course of Events*. Oxford: Oxford University Press.
- Collins, Chris (2005). A smuggling approach to the passive in English. *Linguistic Inquiry* 36.2, 289-297.
- Demirdache, Hamida and Myriam Uribe-Etxebarria (2000). The primitives of temporal relations. In Martin, Roger, David Michaels and Juan Uriagereka (eds.). *Step by Step. Essays on Minimalist Syntax in Honour of Howard Lasnik*. Cambridge, MA: MIT Press, 157-186.
- Demirdache, Hamida (2005). Scope and Anaphora with Time Arguments: The Case of 'Perfect Modals'. Paper presented at the LAGB satellite workshop on Perfectivity and Telicity in Cambridge, UK, September 2005.
- Drai, Dan and Yosef Grodzinsky (2006). A new empirical angle on the variability debate: Quantitative neurosyntactic analyses of a large data set from Broca's Aphasia. *Brain & Language* 76.2, 117-128.
- Fillmore, Charles (1965). *Indirect object constructions in English and the ordering of transformations*. The Hague: Mouton.
- Gehrke, Berit (to appear). Goals and sources are aspectual equal: evidence from Czech and Russian prefixes. To appear in *Lingua*.
- Giorgi, Alessandra and Fabio Pianesi (1997). *Tense and Aspect: from Semantics to Morphosyntax*. Oxford: Oxford University Press.
- Grillo, Nino (2005). Minimality effects in agrammatic comprehension. In Blaho, Schoorlemmer and Vicente (eds.) *Proceedings of Console XIII*, 107-120.
- Grodzinsky, Yosef (1999). The neurology of syntax: language use without Broca's area. *Behavioral and brain sciences* 23, 47-117.
- Grodzinsky, Yosef (2004). Variation, canonicity and movement in aphasic comprehension. Paper presented at the Science of Aphasia V. Conference held in Potsdam, September 2004.
- Higginbotham, James (1995). *Sense and Syntax*. Oxford: Clarendon Press.
- Higginbotham, James (2000). *Accomplishments*. Ms. University of Oxford.
- Hoekstra, Teun (1992). Aspect and Theta-Theory. In Roca, Iggy M. (ed.). *Thematic Structure. Its Role in Grammar*. Berlin: Mouton de Gruyter.
- Hoekstra, Teun (1994). Categories and Arguments. In Samiian, Vida and Jeanette Schaeffer (eds.). *Proceedings of the 24th Western Conference on Linguistics*, 135-145.
- Hoekstra, Teun (1999). Auxiliary Selection in Dutch. *Natural Language and Linguistic Theory* 17, 67-84.
- Jaeggli, Osvaldo (1986). Passive. *Linguistic Inquiry* 17.4, 587-622.
- Klein, Wolfgang (1994). *Time in language*. London / New York: Routledge.
- Krifka, Manfred (1998). The Origins of Telicity. In Rothstein, Susan (ed.). *Events and Grammar*. Dordrecht: Kluwer, 197-235.

- Kratzer, Angelika (2000). Building statives. In Conathan, Lisa J. et al. (eds.). *Proceedings of the Twenty-sixth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, 385-399.
- Manzini, Rita (1980). On Control. Ms. MIT, Cambridge, MA.
- Moens, Marc and Mark Steedman (1988). Temporal ontology and temporal reference. *Computational Linguistics* 14.2, 15-28.
- Partee, Barbara (1984). Nominal and Temporal Anaphora. *Linguistics and Philosophy* 7.3, 243-286.
- Pesetzky, David (1995). *Zero Syntax. Experiencers and Cascades*. Cambridge, MA: MIT Press.
- Piñango, Maria Mercedes (1999). Syntactic displacement in Broca's aphasia comprehension. In Y. Grodzinsky and R. Bastiaanse (eds.), *Grammatical disorders in aphasia: a neurolinguistic perspective*, pp. 75-87. Whurr, London.
- Postal, Paul (2004). *Skeptical linguistic essays*. New York: Oxford University Press.
- Pustejovsky, James (1991). The syntax of event structure. *Cognition* 41, 47-81
- Ramchand, Gillian (2005). Verb meaning and the lexicon. Ms. University of Tromsø.
- Ramchand, Gillian (to appear). Time and the Event: the Semantics of Russian Prefixes. To appear in *Lingua*.
- Reinhart, Tanya (2002). The Theta System – an overview. *Theoretical Linguistics* 28(3), 229-290.
- Rizzi, Luigi (1990). *Relativized minimality*. MIT Press, Cambridge, MA.
- Rizzi, Luigi (2004a). Locality and left periphery. In Belletti, Adriana (ed.), *Structures and beyond. The cartographic syntactic structure volume 2*. Oxford University Press, Oxford, 223-251.
- Rizzi, Luigi (ed.) (2004b). *The structure of CP and IP. The cartographic syntactic structure volume 3*. Oxford University Press, Oxford.
- Roberts, Ian (1985). *The representation of implicit and dethematized subjects*. PhD thesis, University of Southern California, Los Angeles.
- Roberts, Ian (1987). *The representation of implicit and dethematized subjects*. Foris, Dordrecht.
- Roeper, Tom (1983). Implicit arguments and the Head-Complement relation. *Linguistic Inquiry* 18, 267-310.
- Starke, Michal (2001). *Move dissolves into merge. A theory of locality*. PhD thesis, University of Geneva.
- Stowell, Tim (1996). The phrase structure of tense. In Rooryck, Johan and Laurie Zaring (eds.). *Phrase structure and the lexicon*. Dordrecht: Kluwer.
- Tungseth, Mai (2006). *Verbal Prepositions in Norwegian: Paths, Places and Possession*. PhD thesis, University of Tromsø.
- Vendler, Zeno (1957). Verbs and Times. *Philosophical Review* 56, 143-160.
- Zagona, Karen (1990). Times as temporal argument structure. Paper presented at the conference "Time in Language", MIT, Cambridge, MA.

APPENDIX: CREATING THE LINK BETWEEN THE ATEMPORAL EVENT AND THE TEMPORAL DOMAIN

syntax and semantics of tense and aspect involve reference to points/intervals in time (Partee 1984, Zagana 1990, Stowell 1996, Giorgi & Pianesi 1997, Demirdache & Uribe-Etxebarria 2000)

A. Demirdache & Uribe-Etxebarria (2000) (D&U-E)

- intervals event time (EV-T), assertion time (AST-T), utterance time (UTT-T) (following Klein 1994)
- Tense and Aspect are predicates that take temporal arguments (following Zagana 1990)

aspect head: event time as internal argument, assertion time as external argument

- imperfective aspect: assertion time lies within the event time (WITHIN)
- perfective aspect: assertion time lies after the event time (AFTER)

tense head: assertion time as internal argument, utterance time as external argument

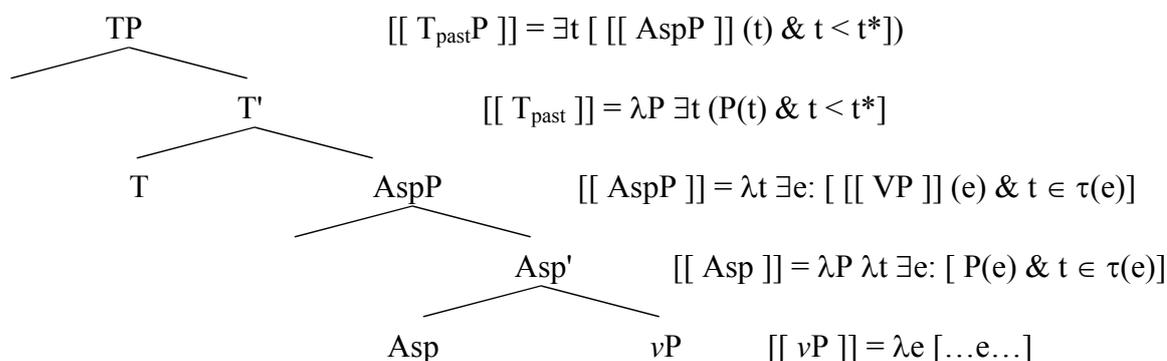
- present tense: utterance time WITHIN assertion time
- past tense: utterance time AFTER assertion time
- (Demirdache 2005:) future tense: utterance time BEFORE assertion time

B. Ramchand (to appear)

“crucial phase boundary between ν P and the temporal phrase structural domain requires the establishment of a relation between the extended event topology which makes no direct reference to times, and the actual time variable which is only introduced at Asp”

- **there is no event time since ν P is crucially atemporal in nature**

(32) **The syntax / semantics of Aspect and Tense in Russian** (Ramchand to appear)



- aspect introduces a time variable [\sim assertion time in D&U-E] that is in some way related to the event structure
- minimal denotation of Asp (in Russian³; $\tau(e)$ is Krifka’s (1998) temporal trace function): $[[Asp]] = \lambda P \lambda t \exists e: [P(e) \& t \in \tau(e)]$
- crucial difference to D&U-E: event time is not existent in Ramchand’s approach but is more or less replaced by Krifka’s (1998) temporal trace function

³ Russian productively expresses grammatical imperfective and perfective aspect by verbal prefixes and suffixes (see Gehrke forth. for a discussion of this). However, this approach can also be carried over to other languages, even such languages that do not have a morphological category Aspect.

problems:

- AspP provides both the temporal trace function as well as the event time
- still not clear in which part of the event the event time is located
- **solution: split Krifka's temporal trace function and introduction of the assertion time**

C. necessary ingredients to link atemporal event structure and temporal clausal domain

- i. Events are complex and consist of atemporal subevents (Ramchand to appear).
- ii. Voice is the syntactic reflex of Krifka's (1998) temporal trace function.
- iii. Voice provides an additional landing site for the part of the event structure that the event time is related to, and in this way it recalls Belletti's (2000) low focus projection.
- iv. Aspect and Tense heads project argument structure with the relevant arguments utterance time⁴, assertion time, event time (Demirdache & Uribe-Etxebarria 2000).

These mechanisms are also needed for active sentences. We could think, then, that in the default case, nothing moves to the position above ν P (or alternatively, the entire ν P moves) and the event time is assigned locally. In other cases, e.g. where the event time has to be placed within a certain subevent, this subevent moves up. This could be the case if the perspective is on the process of an event rather than on its initial or final state (e.g. in the progressive). We will leave this for future research.

What is crucial for our approach to passives, then, is the third point, i.e. the additional landing site for the part of the event structure that the event time is related to. This could be thought of in terms of some quantificational phrase such as Borer's (2005) QP since it clearly involves some kind of quantification over events. Similarly, Arsenijević (forth.) argues that verbal predicates have some functional projection that basically picks out that part of the complex event structure that something is asserted about. In any case, whatever is asserted about the event has to move up; in that sense it could also be the case that it is used to focalise some particular subevent. Hence, in the case of passives, the consequent state moves up to serve as a basis for the event time.

⁴ Or in any case, some reference time which in many cases is the utterance time. See Stowell (1996) for this point.