

9ème Colloque International  
sur le Temps, l'Aspect et la Modalité

# CHRONOS 9

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on Tense, Aspect and Modality

2-4 SEPTEMBER 2009

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Université Paris-Diderot

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(U. of Chicago)

Denis Creissels  
(U. Lyon 2)

Leora Bar-El  
(U. of Montana)

Martina Faller  
(U. of Manchester)

Chris Piñón  
(U. Lille 3)

*Temps, Aspect et Modalité*  
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Sémantique et Modélisation

Structures Formelles du Langage

UMR 7023 CNRS-Paris 8



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**Université Paris-Diderot - Paris 7 &  
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## Stative verbs in Polish and Sranan

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This paper aims to contribute to the cross-linguistic research on aspect. The empirical subjects of the study are aspect markers in Sranan and Polish, and special attention is paid to stative verbs. At first glance, aspectual systems of Sranan and Polish seem very different, perhaps not even comparable. However, a closer look reveals striking semantic correspondences. We argue that the range of semantic variation in the domain of aspect is fundamentally restricted by what Moens and Steedman (1988) call the 'nucleus' structure.

When a Polish speaker refers to an event he does so by using the perfective or imperfective form of verb; there is no (aspectually) neutral verb form available. Hence we speak of the phenomenon of 'aspectual pairs'. An event of writing a letter is presented as being in progress when the imperfective verb is used (1a), and it is viewed as completed when the verb is perfective (1b).

- |     |                                       |            |                                       |            |
|-----|---------------------------------------|------------|---------------------------------------|------------|
| (1) | a. Jan pisał                          | list.      | b. Jan napisał                        | list.      |
|     | Jan wrote-IMPF                        | letter-ACC | Jan wrote-PERF                        | letter-ACC |
|     | 'Jan wrote/was writing a/the letter.' |            | 'Jan wrote/has written a/the letter.' |            |

Within an aspectual pair, one verb functions as the basis for the derivation of the other verb. By far the most verbs are imperfective in their basic form (*pisać* 'to write-IMPF' in 1a), and their perfective counterparts are derived from them by means of prefixes (*napisać* 'to write-PERF' in 1b) or a (semelfactive) suffix; only culmination/achievement verbs are perfective in their basic form, and their imperfective counterpart is derived by means of a suffix. In Młynarczyk (2004) it has been argued that the process of aspectual pairing is guided by Moens and Steedman style semantic distinctions. The Polish system of aspectual pairs seems very symmetric.

In Sranan the situation is quite different. First, the Sranan verb does not mark aspectual distinctions (nor does it mark tense, mood, gender or person). Second, the only Sranan aspectual marker is the imperfective pre-verbal particle *e*. The distribution of this particle has been taken as an argument in favor of the view that Sranan verb system is built upon the stative vs. dynamic distinction. Stative verbs are argued to be imperfective since they do not need to be preceded by *e* in order to be assigned a present tense interpretation (2). Non-stative verbs, on the other hand, must be preceded by *e* in order to get the present tense meaning (3).

- |     |               |     |                        |
|-----|---------------|-----|------------------------|
| (2) | Mi lobi yu.   | (3) | Mi e waka.             |
|     | I love you    |     | I imp walk             |
|     | 'I love you.' |     | 'I walk/I am walking.' |

In this paper we shall only be concerned with stative verbs, as illustrated in (2). Similarly as in Sranan, Polish stative verbs are imperfective in their basic form (4a). However, the application of a perfectivising prefix makes a stative verb perfective (4b). Formally speaking, the process of perfectivising a stative verb proceeds in the same manner as perfectivising of non-stative verbs. However, the semantic result of the perfectivising operation is different than in case of non-stative verbs: far from referring to the endpoint of the event (as in 1b), the perfectivising

prefix refers to the beginning point of states (as in 4b).<sup>1</sup>

- |     |  |  |
|-----|--|--|
| (4) | a. Ja kocham            ciebie.<br>I love-IMPF-PRES   you-ACC<br>'I love you.' | b. Ja pokocham            ciebie.<br>I love-PERF-PRES     you-ACC<br>'I will (begin to) love you.' |
|-----|--|--|

In contrast to Polish, Sranan does not have perfectivising operators. Strikingly, the Sranan stative verb can be preceded by the imperfectivising particle *e*. From the perspective of a Polish native speaker, this is very hard to comprehend. For if the Sranan stative verb is imperfective - why would one want to imperfectivise it?

This 'imperfectivising' operation on Sranan statives holds a surprise at the semantic level: exactly as in the case of Polish perfective stative verbs, imperfectivising a Sranan stative verb takes us back to the beginning phase of the state denoted by that verb (5). Within the beginning phase of the state more fine-grained distinctions arise.

- (5)    Mi    e            lobi    yu  
        I    impf       love    you  
        'I am beginning to love you.'

We shall argue that it is possible to account for these observations by assuming the temporal ontology of Moens and Steedman (1988). In particular, we argue that their nucleus structure, presented in a simplified manner in (6), restricts the set of possible interpretations of aspectual operations and pins down the different routes that human temporal reasoning can take.

- (6)                    preparatory process                    culmination                    state
- 
- //

State can be preceded by a culmination, or a preparatory process which ends with a culmination. There is no culmination coming after state: a state is expected to hold. Hence Polish perfective statives are interpreted as referring to the culmination point that precedes the state. In Sranan, since the only aspect marker available is imperfective, the interpretation of stative verbs with *e* moves to the preparatory process leading up to a culmination (perhaps one could also talk of 'extended' culmination).

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<sup>1</sup> Note that perfective verbs which are morphologically marked as present, get the future tense interpretation (at the level of interpretation perfective present is not available).

## The Truncation/Expansion of Evidential Meaning in Quechua & Basque

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### 1. General research question to be addressed

After decades of fruitful research on evidentiality (EV for short), a basic question lingers: is EV a grammatical category in its own right (Cinque 1999, Aikhenvald 2003, Higginbotham 2006), or an epiphenomenon of other categories (modality, tense, aspect, person or deixis: Izvorski 1997, Ehrich 2001, Lecarme 2003, Speas 2006, *inter alia*). Alternatively, must EV overlap with other categories? (e.g., with epistemic modality for inference: van der Auwera & Plungian 1998).

### 2. The nature and purpose of the study

We present a comparative study of the expression of general, encyclopedic or authoritative knowledge (GN for short; a lesser studied form of EV) in Quechua (Faller 2002) & Basque, whose EV system has been largely ignored. Although the markers differ significantly in their use, we propose that the differences reduce to two independent factors: (i) syncretism of EV with aspect in Basque (vs. focus in Quechua), restricting its expression to habitual, iterative events; (ii) subjectification (Traugott 1989, Langacker 1990) of GN in Quechua, allowing for speaker entitlement & projection of authority (vs. objective detachment in Basque). Our paper supports studying EV independently, while weighing in morphosyntactic restrictions, and diachronic processes, that may truncate, or expand, core evidential meaning in actual linguistic realization.

### 3. GN in existing EV classifications/hierarchies

GN being a lesser studied form of EV, it joins mirativity (DeLancey 1997) as a tight fit in the discussions of how best to characterize EV systems, generally predicated upon well attested forms of sensory, reportative or inferential evidence (Willet 1988, Plungian 2001; in lexical inquiries into EV, GN understandably falls under the radar (e.g., the special issue on lexical EV in *Rivista di Linguistica*, Squartini 2007)). GN is swept under the rug of assimilation/learning (Givón 1982) on the reflection that speakers may present knowledge as their own, having assimilated the information as true (a trademark of lexical systems?), and are not expected to mark this source. Yet Quechua, Basque & other languages do (see Aikhenvald 2004).

### 4. Quechua *-mi*

Among other EV interpretations, *-mi* denotes GN (1, 2). In this role, *-mi* can project authority (replaces the expected reportative *-si* in liturgic text: 3) & speaker entitlement (e.g., arguments). Faller (2002) proposes to classify GN as *non-observable* direct evidence in light of *-mi* being semantically equivalent to sentences unmarked for EV, which in Quechua is perceived as direct evidence. Unmarked EV can also express assimilated knowledge, and so does *-mi* (4). Faller analyzes such knowledge as *Best Possible Grounds* (BPG). Choosing *-mi* over unmarked EV conveys higher certainty (with Cusihuaman 1976, Nuckolls 1993; contra Faller).

#### 4.1 Examples from Quechua [Faller 2002: p. 20, ex. 11a, 11b; p. 19, ex. 10c; p. 143, ex. 146]

1. Yunka-pi-n                      k'usillu-kuna-qa   ka-n  
Rainforest-LOC-mi    monkey-PL-TOP   be-3  
p= 'In the rainforest, there are monkeys.'; ev= p is common cultural knowledge
2. Africa-pi-mi    elefante-kuna-qa   ka-n  
Africa-LOC-mi elephant-PL-TOP   be-3  
p= 'In Africa, there are elephants.'; ev= speaker learned that p from an authority
3. Qallariy-pi-n           Dios-qa    hanaq    pacha-ta                      kay    pacha-ta-wan                      kama-rqa-n  
beginning-LOC-mi    God-TOP    far           time.place-ACC    this time.place-ACC-INSTR    create-PST1-3  
'In the beginning God created the heavens and the earth.'
4. Lima-ta-n            viaja-n.  
Lima-ACC-mi    travel-3  
p= 'She travelled to Lima.'; ev= speaker was told by her (=speaker's sister) that p

## 5. Basque *ohi*

Basque traditional grammars characterize *ohi* as a (redundant) habitual aspect marker, but do so reluctantly. For Zubiri & Zubiri (2000), for example, (i) *ohi* intuitively relates to other “modal” (EV) particles and, paradoxically, (ii) it is felicitous with simple tenses, which cannot express habitual. Alcázar (2003) notes an aspectual difference between the imperfective suffix *-t(z)en* & *ohi*. With *-t(z)en* ‘John sells houses’ is ambiguous between a generic and habitual interpretation, but if expressed with *ohi*, John *must have* sold houses (it cannot be that he just started). This difference may be better captured in EV. Data from a Spanish-to-Basque parallel corpus shows that *ohi* expresses GN (5-11). Note that the flanking **adverbial/verbal expressions** in the original (7-11) are dispensed with by using *ohi* (if translated with *-t(z)en*, they are preserved). *Ohi* presents the information objectively, in a detached, factive fashion. The level of certainty conveyed is higher than unmarked EV, which in Basque also implies direct evidence or BPG.

### 5.1 Examples from Basque [Consumer Eroski Parallel Corpus, <http://sli.uvigo.es/CLUVI/>]

5. Saber aprender, como otras muchas cosas en la vida, no es algo que se logre de una vez para siempre // Ikasten jakitea —bizitzako makina bat kontu bezala—ez ohi da ikasten behin betirako.  
‘Learning how to learn, as with many other things in life, you don’t achieve once and for all’
6. Las consecuencias psicológicas son mucho menores para ellos, [son] similares a las que pueden derivarse de otro tipo de cáncer // Ondorio psikologiko dezente arinagoak pairatzen ditu gizonetakoak, bestelako minbizia nozitzearen parekoak izan ohi dira.  
‘The psychological consequences are less severe for them, [they are] similar to the ones that may result from other types of cancer’
7. se suele decir que su aportación se reduce a ‘calorías vacías’ // esan ohi da bere ekarpena “kaloria hutsetara” mugatzen dela. ‘It is usually said that it just contributes “empty calories”’
8. Se pueden definir cuatro grados de tueste // lau txigortze maila bereizi ohi dira  
‘Four roast degrees can be defined’
9. Estas cuentas se gravan generalmente con dos comisiones // Kontu horiek bi eratako komisioez zamatu ohi dira ‘These bank accounts are generally charged with two fees’
10. Como consecuencia del tratamiento más que de la operación, lo habitual es provocar una menopausia anticipada. // Ebakuntza baino areago, tratamenduaren ondorioz, menopausia goiztiarra probokatu ohi zaio pazienteari.  
‘As a consequence of treatment, rather than the procedure itself, what usually happens is that early menopause is provoked in the patient.’
11. por desconocimiento o comodidad se tiende a escoger siempre tan sólo unas pocas especies.  
ongi ez ezagutzearen edo eroso jarduteagatik, espezie gutxi batzuk aukeratu ohi du jendeak.  
‘because of lack of information or coziness people tend to always choose a few species’

## 6. Analysis

We propose that GN is restricted to utterances expressing habituality/iterativity in Basque due to the syncretism with the category aspect. Thus, “God exists *ohi*” is ungrammatical in Basque (it would imply God has existed multiple times) but felicitous in Quechua, while “men believe in god” or “societies develop belief systems” are good in both languages. Furthermore, GN in Quechua has gained grounds over hearsay EV by virtue of *projecting* authoritativeness. Comparison with Basque warrants an analysis of said use not as core evidential meaning of GN, but rather as an extension via subjectification, a (diachronic) process where an element acquires the viewpoint of an illocutionary agent (Traugott 1989, Langacker 1990; e.g., epistemic modals).

## 7. Conclusion

We have attributed divergent uses of GN in Basque & Quechua to independent linguistic factors, vindicating the study EV in its own right, alongside possible interactions with other categories.

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### **L'emploi des modes et des temps en swahili d'après l'étude de Pères Blancs missionnaires**

Cette communication a pour objet la contribution de Pères Blancs dans la connaissance du kiswahili, à travers l'étude de quatre grammaires, celles de Delaunay (1885), Ch. Sacleux (1909), E. Brutel (1913) et F. Van den Eynde (1944).

Nous nous interrogerons en particulier sur leur analyse des temps verbaux (formes simples, sans pronom relatif intercalé). **Comment ces missionnaires ont-ils rendu compte des oppositions temporelles, aspectuelles et modales de cette langue ?**

L'intérêt du corpus réside dans le fait que ces grammaires figurent parmi les principales écrites à l'époque pour décrire et normaliser le kiswahili. L'une des raisons est que dès 1880, la consigne du Conseil Général (des Missionnaires d'Afrique) était de « désigner un Père dans chaque poste pour composer dans la langue indigène un vocabulaire et une grammaire » pour satisfaire aux intérêts coloniaux liés à l'évangélisation des peuples colonisés. Ce qui est remarquable c'est que ces missionnaires n'avaient pas de formation spécialisée en linguistique. Cette situation soulève des questions d'ordre épistémologique et méthodologique. Dans quelles mesures, par exemple, leur description du système verbal swahili est-il l'adaptation des catégories françaises ? « Il y a peu de temps dont la correspondance avec ceux du français soit parfaite ; c'est pourquoi plusieurs des équivalences françaises des temps swahilis ne doivent être acceptées que comme des approximations » (Ch. Sacleux, 1909). Nous examinerons les confusions effectuées entre marques morphologiques, valeurs temporelles et valeurs aspectuelles.

Nous verrons notamment que l'inventaire des formes verbales et leur emploi varient selon les auteurs comme le montre l'exemple suivant pour le « conditionnel » (conjugaison affirmatif) :

| <b>Delaunay<br/>1885</b>  | <b>Sacleux<br/>1909</b>   | <b>Brutel<br/>1913</b>   | <b>Van den Eynde<br/>1944</b>   |
|---|---|--|---|
| Présent<br><i>-nge- ou -nga-</i><br><i>ni-nge-penda</i> j'aimerais                  | Conditionnel indéfini<br><i>Ni-ngè-ku-fa</i> Je mourrais<br><i>Ni-ngè-kana</i> je nierais             | Présent<br><i>Nge, nga</i><br><i>Ningependa</i> j'aimerais                                 | Présent<br><i>-nge (ou -nga)</i><br><i>Ni-nge-kata</i> , je couperais                       |
| Passé<br><i>-ngali-</i><br><i>ni-ngali-penda</i> j'aurais aimé                      | Conditionnel passé<br><i>Ni-nga-li ku-fa -</i> Je serais mort<br><i>ni-nga-li-kana –</i> j'aurais nié | Passé<br><i>-ngali-</i><br><i>ningalipenda</i> j'aurais aimé                               | Passé<br><i>-ngali</i><br><i>Ni-ngali-pita</i> je serais passé                              |
| Autre temps<br><i>-ki-</i><br><i>ni-ki-penda</i> moi aimant (si j'aime)             | [cette forme est rangée par Sacleux dans « mode participial », avec la même traduction]               | Autre temps<br><i>ki</i><br><i>nikipenda</i> moi aimant ou si j'aime                       | Conditionnel (participe présent)<br><i>-ki</i><br><i>Ni-ki-jua</i> si je sais (moi sachant) |
| Autre temps<br><i>-dyapo-</i><br><i>ni-dyapo-penda</i><br>dans le cas où j'aimerais | Conditionnel inefficace<br><i>Ni-dya-po ku-fa</i> quand (même) si je meures<br><i>Ni-dya-po kana</i>  | Autre temps<br><i>Dyapo ou japo (p.23)</i><br><i>Nijapopenda</i> dans le cas où j'aimerais | Autre conditionnel<br><i>-japo</i><br><i>Ni-japo-leta</i> dans le cas où j'apporte          |

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## ASPECTUAL USES OF PREFIX *be-* IN LITHUANIAN

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Though Lithuanian, despite many similarities to Slavic, has no grammaticalized opposition between perfective and imperfective aspects (Kränzle 1997, Wiemer 2002), it is by no means deprived of aspectually relevant categories (see Mathiassen 1996). First of all, there is an inflectional opposition between a Simple Past and a Habitual Past (sometimes called Frequentative, Roszko, Roszko 2006). Second, there is a whole set of more or less productive derivational processes (prefixation and suffixation) affecting such components of meaning as telicity/atelicity, semelfactivity/multiplicativity/iterativity (Geniušienė 1997), etc. Finally, there is a number of periphrastic forms expressing Perfect and Resultative (Geniušienė, Nedjalkov 1988).

However, this is not the whole story, since in Lithuanian there are several aspectual verbal forms which have not yet received much attention from linguists. All of them employ the polyfunctional prefix *be-* which I will provisionally gloss ‘continuous’.

The first of these forms is a periphrastic construction involving the auxiliary *būti* ‘to be’ (mostly in the past tense, but future and subjunctive are also attested; notably, the present tense of the auxiliary is not permitted in this construction, at least in the standard language) and the present active participle obligatorily prefixed with *be-*. This form, called ‘thwarted inceptive’ by Mathiassen (1996), expresses a meaning similar to that of ‘proximative’ or ‘avertive’, recently recognized as a cross-linguistic gram by Kuteva (2001), i.e. that the situation was going to happen but for some reason was interrupted. Cf. examples (1) and (2):

- (1) *Aldon-a buv-o be-plauk-ia-nt-i per Nemun-q.*  
 A.-NOM AUX-PST CNT-swim-PRS-PA-NOM.F across N.-ACC  
 ‘Aldona was just going to swim across Nemunas’ <but her friends stopped her>
- (2) *Aldon-a buv-o be-išein-a-nt-i, bet persigalvoj-o ir sustoj-o.*  
 A.-NOM AUX-PST CNT-leave-PRS-PA-NOM.F but change.mind-PST and stop-PST  
 ‘Aldona was about to leave, but she changed her mind and stopped.’

It is worth noting that Lithuanian Proximative interacts in a non-trivial way with the eventuality type of the verb. With verbs denoting instantaneous events, such as *išeiti* ‘leave’ in (2), the construction expresses the preparatory stage of the situation; similarly, with inherently durative eventualities, such as *plaukti* ‘swim’ in (1) or *miegoti* ‘sleep’ in (3), the construction expresses the state of affairs which would have resulted in the beginning of the relevant situation. By contrast, with verbs denoting culminations of telic events, such as *perplaukti* ‘swim across’ in (4), Proximative focuses on the durative phase of the situation and implies that the result has not been achieved.

- (3) *Rūt-a buv-o be-mieg-a-nt-i, kai suskamb-o telefon-as.*  
 R.-NOM AUX-PST CNT-sleep-PRS-PA-NOM.F when ring-PST telephone-NOM  
 ‘Ruta was almost sleeping when the telephone rang.’
- (4) *Aldon-a buv-o be-perplauk-ia-nt-i Nemun-q, bet nuskend-o.*  
 A.-NOM AUX-PST CNT-swim.across-PRS-PA-NOM.F N.-ACC but drown-PST  
 ‘Aldona has almost swum across Nemunas, but drowned.’

The other two forms with prefix *be-* are synthetic and express the continuative meaning, usually in combination with one of the further prefixes: *ne-* expressing negation, as in (5), and *te-*, another fairly polyfunctional prefix, used here as an affirmative marker (6).

- (5) *Aš ne-be-suprant-u, k-q j-is kalb-a.*  
 I(NOM) NEG-CNT-understand-PRS.1SG what-ACC he-NOM say-PRS  
 ‘I no more understand what he is saying.’

- (6) *Kai* *aš* *parėj-a-u,* *Kaz-ys* *te-be-raš-ė* *laišk-us.*  
 when I(NOM) come-PST-1SG K.-NOM AFF-CNT-write-PST letter-ACC.PL  
 ‘When I came home, Kazys was still writing letters.’

In contrast to the proximative, these two forms co-occur with different tenses and moods, and appear also in non-finite verb forms and even in nominalizations. However, they show interesting aspectual restrictions, i.e. they are added only to durative predicates, cf. ungrammatical Simple Past *\*tebeatidarė* from an instantaneous verb *atidaryti* ‘open’. Notably, this constraint is not lexical in nature, since the same verb allows *tebe*-construction when used habitually, cf. (7).

- (7) *Kaz-ys* *te-be-atidar-o* // *te-be-atidary-dav-o* *lang-q* *prieš užmig-dam-as.*  
 K.-NOM AFF-CNT-open-PRS // AFF-CNT-open-HAB-PST window-ACC before fall.asleep-CNV-NOM.M  
 ‘Kazys still opens // still used to open the window before going to sleep.’

Examples like (7) show that *be-* is attached after the habitual operator makes the situation homogeneous (Vikner 1994), but the opposite scope is also possible, cf. ambiguous (8):

- (8) *Baland-į* *ne-be-šalta.*  
 April-ACC NEG-CNT-cold  
 i. ‘In April, it is no more cold.’ <but in March it is still cold>, habit. > *ne-be-*  
 ii. ‘It is no more cold in April.’ <but it used to be cold in previous years>, *ne-be-* > habit.

This data, as well as further material on the interaction of these prefixal forms with certain periphrastic constructions, sheds important light on the hierarchy of clausal operators in Lithuanian, which at first sight remains covert and very hard to uncover due to the seeming paucity of TAM forms in this language.

### Abbreviations

ACC – accusative, AFF – affirmative, AUX – auxiliary, CNT – continuative, CNV – converb, F – feminine, HAB – habitual, M – masculine, NEG – negation, NOM – nominative, PA – active participle, PL – plural, PRS – present, PST – past, SG – singular

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## Le médiatif en kurde-kurmandji: une résurgence du système verbal du kurmandji

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« Toutes les langues, naturellement, ont la possibilité d'exprimer les notions médiatives, mais toutes ne les grammaticalisent pas » affirme Lazard (2000). Le kurde kurmandji, dialecte pratiqué par deux tiers des Kurdes, fait partie des langues qui grammaticalisent ces notions.

Le médiatif en kurmandji a été l'objet de très peu d'études linguistiques. Nous avons relevé trois formes verbales entrant dans cette catégorie, que nous appelons le *prétérit du médiatif*, le *plus-que-parfait du médiatif* et l'*imparfait du médiatif*. Ces trois formes qui se construisent à l'aide d'un marqueur spécifique (-e) à partir de leurs homologues de l'indicatif s'opposent nettement à celles-ci et marquent également une chronologie entre elles.

Quant à l'*imparfait du médiatif*, il ne se forme qu'avec les verbes *bûyin* et *hebûn* (être et avoir) et uniquement dans le but d'indiquer que l'information transmise est obtenue par une tierce personne. Cette forme, tout comme le *plus-que-parfait du médiatif*, était en voie de disparition et se caractérisait par un emploi géographiquement limité jusqu'il y a quelques années.

Or, longtemps interdit en Turquie où se trouve la plus grande zone de son emploi, le kurmandji bénéficie aujourd'hui d'une pratique écrite qu'il n'a jamais connue, laquelle fait ressurgir les formes abandonnées. Des exemples relevés dans les textes littéraires et journalistiques démontrent que les deux formes peu usitées du médiatif se manifestent de plus en plus dans les publications et ne semblent plus se borner à des zones géographiques ni à une tranche d'âge.

Comment ces deux formes font-elles leur retour dans le système verbal du kurmandji ? Aujourd'hui, quelles valeurs conservent-elles ? Ont-elles vraiment des valeurs temporelles dans la mesure où le *plus-que-parfait du médiatif* semble exprimer l'antériorité par rapport au *prétérit du médiatif* ?

Ayant recours à un corpus écrit constitué à partir de textes littéraires récemment édités et de textes journalistiques diffusés sur internet, notre communication se propose de faire un bilan du *médiatif* en kurmandji.

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## **Encoded features of epistemic inter-subjectivity: towards a typology**

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To date, no attempt has been made from a typological perspective to account for the existing, grammatical-paradigmatic means that languages have to position information with regard to the assumed knowledge/attention/expectation of the addressee(s) in declarative and interrogative utterances. Except for fragmentary comments (e.g. Nuyts 2001, Palmer 1986), the possibility of such a pragmatically conditioned expression in grammaticalized form has only occasionally been noted, and never systematically studied.

Although the concept of inter-subjectivity has a tradition in philosophy and cognitive studies (cf. Zlatev et al. 2008; Verhagen 2008), it has not yet escaped the broader notion of modality in mainstream linguistics. This is despite the strong possibility that epistemic inter-subjectivity is separate conceptually from the commitment by degree of a subjective kind, which is in essence is epistemic modality. This being said, the former may be a development of the latter, as argued by Dasher & Traugott (2002).

The suggestion has been put forth that epistemic inter-subjective expressions (i.e. ones that take the addressee into account) are a form of evidentiality (cf. Palmer 1986, Aikhenvald 2004), but why this should be the case has not been argued for convincingly. The source of information, whether something was seen, heard, inferred, or reported, must be considered as conceptually separate from speaker/addressee access to knowledge, as asymmetrical or symmetric, which is the core semantic feature of epistemic inter-subjective evaluations.

A language that has both categories is Southern Nambikwara (Kroeker 2001). As an agglutinative, head-marking language, Southern Nambikwara clearly displays separate suffixes on the finite verb that, by order of mention, pertain to: person, evidentiality, tense, individual/collective access, and aspect. The importance of whether some information is individually or collectively accessible can be seen from the fact that evidential and tense markers have different forms depending on this categorical distinction.

In recent years, mounting research suggests that markers and grammaticalized expressions with a semantic core pertaining to inter-subjective evaluations is a more frequent feature in languages than previously noted (cf. Bergqvist 2008, Evans 2007; Kroeker 2001; Landaburu 2007; Olaya Perdomo 2000; Ortíz Ricaurte 1994; San Roque forthcoming; Telles 2002). In the wake of this, it seems appropriate to gather the information at hand to draw a clearer picture of what the semantic and grammatical properties are of markers whose main function it is to specify symmetries in knowledge access between the speech participants.

Important issues in defining a grammaticalized, categorical expression of epistemic inter-subjectivity are ones that pertain to the representation of memory, attention and perceptual access to some discourse object by the addressee. It is likely that languages with a categorical notion of epistemic inter-subjectivity draw on these parameters to

different degrees and that fine-grained distinctions between these concepts may underlie their semantics.

One has to keep in mind that the asymmetry judgments are entirely in the mind of the speaker and does not reflect the “proper” views of the addressee. What is at stake is the assumed knowledge and/or attention of the addressee in the estimation of the speaker from the available evidence, which may be of an immediate or non-immediate kind, i.e. guesses, memories, intuitions and direct evidence, to mention a few.

The ad-hoc assumption of this paper, although not empirically tested, is that all languages have the means to mark statements in terms of inter-subjectivity, be it by intonation, lexical, or in grammaticalized form, the presentation of information as accessible or inaccessible to the addressee, must be considered as a basic resource in language. A more specific claim is that there are languages that have grammaticalized, what may broadly be called epistemic inter-subjective evaluations, in a paradigmatic way with systematic semantic oppositions corresponding to what we find with other categorical expressions such as tense and mood.

Languages that will be discussed with regard to the present proposal are found in South-America (Andoke, Kogi, Southern Nambikwara), Papua New Guinea (Duna), and the Caucasus (Chechen, Akhvakh). In these languages, the marking of information as either accessible or inaccessible to the addressee is done in a variety of ways and with different diachronic origins for the grammatical elements in the form of clitics and affixes that carry the function of marking epistemic inter-subjectivity. However, the paper argues that such markers should be analyzed and understood as expressions of a categorical notion that is separate from, but related to, both modality and evidentiality proper.

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## Some remarks on *começar* and *passar* in Brazilian Portuguese

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In Brazilian Portuguese (BrP), there are some verbal periphrases which give a semantic contribution to express the Aspect of a sentence. They are usually formed by an aspectual verb (also called ‘aspectualizer’) and a gerund or infinitival construction as their complement. This work focuses on two aspectualizers in BrP, namely *começar* (‘begin’) and *passar* (‘pass’), which select infinitival construction as complements. Usually, it is assumed that they express the beginning of an eventuality. This work intends to analyze in which ways they are similar or different in performing this role.

The literature devoted to aspectual verbs (Rochette 1988, 1999; Oliveira *et al.* 2001; Laca 2002, 2004; Lunguinho, 2007, among others) shows that they select for specific types of eventualities (states, activities, achievements or accomplishments, in Vendler’s terminology) as their complements. Thus, this work aims at verifying what types of eventualities are selected by *começar* and *passar* and how that selection can help us understand the semantics of those verbs in BrP.

Aspectual verbs are generally understood as verbs that focus on a specific phase (or a stage) of the temporal structure of an event. In the case of *começar* and *passar*, they describe the beginning of the eventuality that follows them denoted by their complements. As pointed by Bertucci (2009), the semantic contribution given by these verbs is to express the *onset* of a situation, since they express their beginning, as one can see in the following examples:

- (1) a. João *começou* a estudar.  
John begin.PERF PREP study.INF  
‘John began to study.’  
b. João *passou* a estudar.  
John pass.PERF PREP study.INF  
‘John began to study.’

In order to explain what the aspectual operation of these verbs is, this research has taken Landman & Rothstein’s (2008) notion of *onset*, roughly defined here as the smallest initial event in a given eventuality. Thus, in an eventuality like the ones denoted by ‘study’, its initial part is ‘study’ too, because it is an activity. In the case of ‘build the house’, the initial part can be ‘build the foundations of the house’, since it is an accomplishment and denotes an incremental sequence of events. In any case, however, it is possible to speak of an initial event, called the *onset*.

Although *começar* and *passar* behave similarly in many contexts, Travaglia (2006, p. 211) shows at least an important difference between them: *passar*, rather than *começar*, carries an “implication that there was a situation in progress, and there was, there is or there will be a situation change”. That is a good idea to explain cases like (2): there is a predicate as ‘to be the oldest of the team’ and there is a situation change, that is, John becomes the oldest of the team (after Peter’s exit, for example). Because of that, *passar* (2b), unlike *começar* (2a) is the best aspectualizer to operate over states.

- (2) a. ??João *começou* a ser o mais velho do time.  
 John begin.PERF PREP be.INF the oldest of the team.  
 ‘John began to be the oldest of the team.’  
 b. João *passou* a ser o mais velho do time.  
 John pass.PERF PREP be.INF the oldest of the team.  
 ‘John became the oldest of the team.’

However, sentences like (2) bring us a question: what types of aspectual classes are selected by *começar* and *passar*? As showed in (1), both of them accept activities (‘study’, e.g.). Sentences (2) indicate that states are usually selected by *passar*. Some achievements can be complements of *começar* if it is possible to show the progress of the first part of the achievement (3a). *Passar* does not accept achievements as its complement (3b).

- (3) a. Pela manhã, João *começou* a atingir o topo.  
 In the morning, John begin.PERF PREP reach.INF the summit .  
 ‘In the morning, John began to reach the top.’  
 b. \*Pela manhã, João *passou* a atingir o topo.  
 In the morning, John pass.PERF PREP reach.INF the summit.  
 ‘In the morning, John began to reach the top.’

Finally, both *começar* and *passar* accept accomplishments as their complements.

- (4) a. João *começou* a ler o livro.  
 John begin.PERF PREP read.INF the book  
 ‘John began to read the book.’  
 b. João *passou* a ler o livro.  
 John pass.PERF PREP read.INF the book  
 ‘John began to read the book.’

The cases presented here indicate a difference between *começar* and *passar*: while, *começar* express the onset of an eventuality, *passar* express the onset of a situation. Because of this fact, this work claims that eventualities selected by *começar* need to have stages (and these stages do not need to be similar, as the stages of ‘build a house’), while those selected by *passar* need to have ‘parts’ similar to the whole event (as the parts of ‘study’).

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### Spanish verb complexes and pluractionality

Pluractionals, which are to events what plural is to nominals, have been argued to exist in West African and Amerindian languages ; the concept been extended lately to Indoeuropean languages (see Van Geenhoven 03,04, Laca 03). To this growing typology I add the syntactic and semantic study of the Spanish *ir (to go) + gerund* periphrasis (Serial Progressive or **SP**), which has two main interpretations (Laca 03; Borgonovo & Bosque 02- B&B):

1. a. Los chicos fueron entrando.

*the children GO-pret enter-gerund* 'The children entered one by one'

b. Truth conditions: the children in the context entered and this entering event is subdivided into sub-events of entering such that in each of them each one of the children entered and these sub-events are distributed in time intervals temporally ordered and which do not overlap.

2. a. Pedro fue armando el rompecabezas.

*P. GO-pret solve-Gerund the puzzle* 'Pedro solved the puzzle little by little'

b. Truth conditions: Pedro solved the puzzle and this event is subdivided in puzzlesolving stages distributed in time intervals that do not overlap such that each of the stages gets the event closer to its telos.

SP multiplies instances of events –as in 1a- or stages of a single event –as in 1b- to form a pluractional macro-event. I claim that scalarity is central to the analysis of SP: SP either finds or builds a scale (scale understood as a set of points totally ordered, in this case, along the time dimension) and imposes a requirement of a minimum of two intervals on it. Let's see how this works with the range of acceptable SPs. In 2 we have a theme, the puzzle, which gets interpreted incrementally. According to Hay, Kenedy & Levin (2000)- H,K&L-incremental theme verbs involve a gradable property which is defined by the spatial extent of this theme. In 2, it is the area: each puzzle-solving stage adds to the area of what will become the solved puzzle. SP changes the relation between the object, the degree and the event. If a computer solved puzzles instantly, this event could be described as *el ordenador armó el rompecabezas* (the computer solved the puzzle) but not as *\*el ordenador fue armando el rompecabezas*, because SP imposes the 2-interval requirement and the scale's starting and final values results in one interval.

Turning now to 1, SP builds a scale out on an unordered set (the children), whose members are ordered when interpreted as the agent-theme of a series of entering events, until the group of children is exhausted. This explains why achievements are ungrammatical without a plural argument, since no scale can be build out of a one membered set (see Jackendoff 96 for a similar approach to certain plurals). There are four main types of base predicate that form good SPs : incremental theme Vs as in 1, achievements with plural arguments as in 2, degree achievements (3) and delimited activities (4, ex from B&B). Let's see how the scalar proposal fares with the two last ones

3. el vaso se fue llenando. 'the glass got progressively fuller'

4. fue encontrando arena en todas las habitaciones de la casa.  
'he kept finding sand in all the rooms in the house'

Degree achievements have been argued to introduce a degree argument as part of their semantics (H,K&L, Piñón 2000,07) ; they are thus inherently scalar. H,K&L claim that a verb like *to fill* is a three-place predicate between events, degrees and objects and it can be paraphrased « object x gets fuller in event e to degree d ». SP, in the case of degree achievements, modifies the relation that holds between the three entities –object, event and degree- by imposing a condition on the minimal number of degrees involved to three, i.e., the

scale has to have at least two intervals. This is clearly shown in 5 : *la letra A se va agrandando* (A GOES-getting bigger) is not an appropriate description of (5b) but it is of 5(a), whereas *la letra A se agranda* is appropriate in both situations (B&B):

5. a. A A A                                      b. A A

In 4, a delimited activity, SP forms a scale out of the set of rooms and makes them the location of an ordered set of sand-finding events, until the set of rooms is exhausted. The scalar hypothesis also explains why activities (6b) and (some) states (6b) are not acceptable :

6. a. \*fue siendo inteligente. ‘he WENT-being intelligent’

- b. \*te fui esperando en la esquina. ‘I WENT-waiting for you at the corner’

No change is encoded in states, so no scalar analysis is possible ; activities do encode change but not mappable into a scale. Both eventuality types form acceptable SPs one once the change is explicitly made scalar by the additio of an adjunct:

8. a. P. fue cantando \*(cada vez más fuerte)

P. *Go-Pret sing-Ger each time more loud* ‘P. sang progressively louder and louder’

- b. P. fue sabiendo \*(más y más) física.

P. *Go-Pret know-Ger more and more physics* ‘P. knew more and more physics’

I explore further intriguing properties of SP :

1. in spite of its morphological kinship with progressive tenses, SP does not exhibit the imperfective paradox, i.e., the inference from the past SP to the simple past is always valid with accomplishments (B&B, Laca 07):

9. Juan se fue muriendo  $\subset$  Juan murió. ‘Juan WENT-dying  $\subset$  Juan died’

Since the imperfective paradox has been taken to be one of the central components of the meaning of the progressive and since SP does not show it, we conclude that SP is not aspectually progressive. The telos is under the scope of SP.

2. the SP does not exhibit the sub-interval property but 3. SP rejects adverbials compatible with telicity (B&B, Laca 2005).

10. a. \*los chicos fueron entrando en una hora.

‘The children WENT-entering in one hour’ (entered one by one in an hour)

SP seems to exhibit contradictory behavior with regards to telicity. I claim that SP does not change the telicity properties of the base, almost always telic. The reason for the ungrammaticality of 10 is that *in an hour* is not the right kind of adverbial to combine with SP because SP requires the gradual reaching of the telos, encoded in the two interval requirement. *In an hour* looks at an event as an undivided unit and does not permit getting inside the macro-event in its development, which is crucial to the semantics of SP. Thus the unacceptability of these adverbials is not argument against telicity but stems from a finer grained semantic incompatibility and provides indirect support for this analysis. On the syntactic side, SP tests positive for restructuring but its syntactic properties are not compatible with the two main competing approaches to monoclausality, represented by Wurmbrand (05, 06) and Cinque (99). To start with, there is no evidence for VP constituenthood, which both approaches take for granted: the alleged VP cannot prepose, cleft, be contrastively focused, A’-move or delete and no material can intervene between *Ir* and the gerund. Furthermore, there are a number of alternative orderings with other functional heads and these orderings all have semantic consequences ; this is problematic for Cinque’s theory, which posits a fixed and largely language-independent ordering of functional heads on the left periphery. I argue for V-V adjunction as the best account of the phrase structure properties of SP ; this adds a new type of pluractional marker to the existing typology.

### **Bringing together tense and mood in Capeverdean Creole**

In this talk, I will outline an analysis of the tense-aspect-mood system in Capeverdean Creole (henceforth CVC) with special attention on the two main markers in this domain: the preverbal *ta* and the suffixal *-ba*. The discussion in the recent literature on CVC has been revolving around a question of whether these markers are aspectual, temporal or modal. Baptista (2002) defends a position that *-ba* marks past tense and *ta* is an aspectual and a modal marker. Her conclusions differ from the conclusion of Silva (1985), who argued that *ta* is a non-past marker and Suzuki (1994), who analysed *ta* as a modal (irrealis) marker. Pratas (2007) avoids commitment with respect to the status of *ta* and *-ba* and assigns them meanings contextually. In this paper, I will argue that the analysis of *-ba* as a past tense morpheme successfully captures its distribution, whereas *ta* can be said to be 'modal', although not in the same sense as either Baptista (2002) or Suzuki (1994) intended it.

I argue that the analysis of *-ba* as a past tense marker proposed in Baptista (2002) is essentially correct, but needs to be extended along the lines proposed in Iatridou (2000). The proposal of Iatridou, in a nutshell, is that a past tense morpheme excludes a time (Utterance time) or a world (the actual world) associated with the speaker. In the former case, the past morpheme yields a past temporal interpretation, in the latter, it brings about counterfactuality. If the past morpheme *-ba* in CVC is analyzed as an 'exclusion' morpheme, it allows us to capture the uses of *-ba* in simple past sentences like (1), in counterfactuals, especially in the Future Less Vivid contexts, e.g. (2), and in the wish-sentences, e.g. (3).

In CVC, counterfactual contexts illustrated in (2) feature a combination of *ta* and *-ba* in the consequent clause. This is largely the reason why *ta* was attributed the 'irrealis' meaning (comparable to a *conditional* mood) in the presence of the 'past' tense marker *-ba*. Apart from the counterfactuals, *ta*, as noted in Baptista (2002) and Pratas (2007), has a number of other uses: in (4), *ta* brings in a present habitual interpretation, (5) illustrates the use of *ta* to mark future, and (6) receives a habitual past interpretation. These observations lead Baptista (2002:80) to conclude "that *ta* can function as an aspectual marker as well as a modal marker".

Instead of allowing for ambiguity in the interpretation of *ta*, I will argue that the distribution of *ta* is strictly limited to the standard conditional context of the type "If  $p \rightarrow q$ ", where *ta* always appears in a consequent clause. In other words, *ta* can never be used in a context referring to something happening 'unconditionally'. A sentence with *ta* can never refer to an eventuality actualized in the real world, the requirement is always to first set the conditions under which something can or cannot happen. This excludes the use of *ta* in sentences referring to either present ongoing eventualities or to past episodic ones. A sentence with *ta* can never refer to an eventuality with a specific temporal reference. Conditionals, however, are the main contexts where *ta* appears. Whether a conditional is counterfactual as in (2), or indicative as in (7) does not matter.

In those cases where *ta* gives rise to a future (5) or habitual ((4) and (6)) interpretation, it can be seen as a marker in the consequent of an unspoken antecedent. The future reading exemplified in (5) is, intuitively, only occurs under the condition "If nothing prevents it". Thus, the full interpretation of (5) should represent the proposition of the form "If nothing prevents it, I will meet your friend tomorrow". The habitual reading is, in a sense, a generic variant of the

unspoken antecedent that gives rise to a future interpretation: the full interpretation of (4) is "Whenever nothing prevents it, I eat ketchup for dinner". The habitual, in CVC or any other language, does not indicate that something happens all the time or even most frequently. The habitual interpretation simply is "whenever the opportunity arises".

Given the proposed analysis of *-ba* and *ta*, we can now predict the possible interpretations when the two markers co-occur. The prediction is that *ta* brings about two possible readings in the past domain: it can either be a past habitual or a future in the past. Both readings occur. The habitual reading is illustrated in (6). The habitual past reading is intuitively captured along the same lines as the habitual present, i.e. as a consequent of an unspoken antecedent with the reference to the past "Whenever nothing prevented it, I ate ketchup for dinner". The past conditional and the future in the past readings, however, are not easy to tease apart, just as in English.

Examples:

- (1) N konxe-ba Lisboa dretu.  
I know-pst. Lisbon well  
*I knew Lisbon very well.*
- (2) Si N fika-ba un anu na Kauberdi, N ta papia-ba kriolu dretu.  
If I stay-pst one year on Cape Verde, I TA talk-pst creole perfect  
*If I stayed in Cape Verde for a year, I would speak Creole fluently*
- (3) N kre-ba ser-ba veterinario, mas N bai pa pursor.  
I want-pst be-pst veterinarian but I went for teacher.  
*I wished I had become a veterinarian, but I am a teacher*
- (4) N ta kume ketchup na djanta.  
I TA eat ketchup at dinner  
*I eat ketchup for dinner (usually, as a habit).*
- (5) (Manha) N ta kontxe bo amigu  
(tomorrow) I TA know 2<sup>nd</sup>.poss friend  
*(Tomorrow) I will meet your friend*
- (6) N ta kume-ba ketchup na djanta  
I TA eat-pst ketchup at dinner  
*I used to eat ketchup for dinner*
- (7) Si N bai bo kaza di noti, N ta txoma-u  
If I go 2ndPoss house at night I TA call-you  
*If I go to your house tonight, I will call you.*

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## Futur et conditionnel en français : mêmes combats temporels et modaux ?

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Les grammaires ont de longue date attiré l'attention sur le parallélisme des emplois du futur et du conditionnel, en appui sur la parenté de leur origine bas-latine :

futur : V. inf. + *habere* au présent  
conditionnel : V. inf. + *habere* à l'imparfait

Dans leur article de 2001, Vet et Kampers-Manhe 2001 durcissent le trait : ces deux temps auraient des emplois temporels semblables, à partir desquels sont explicables leurs emplois modaux, également en tous points similaires. Leur analyse, extrêmement stimulante, me semble à la fois insuffisamment et trop appuyée :

– elle oublie certains faits de discours similaires, comme p. ex. l'emploi historique (ou *objectif*) de ces deux temps :

(1) Quelle leçon, pour ce pauvre prêtre tourmenté que la découverte de ce juste ignoré de tous et de lui-même (...). Hélas ! pour une part, cette leçon *serait* vaine. La paix qu'il ne *connaîtra* jamais, ce prêtre est nommé pour la dispenser aux autres. (Bernanos, *Sous le soleil de Satan*)

– elle laisse de côté des emplois du futur qui n'ont pas leur pendant du côté du conditionnel (p. ex. l'emploi « de bilan », (2)) et des emplois du conditionnel qui n'ont pas leur pendant du côté du futur (p. ex. l'emploi *préludique*, (3)) :

(2) « Tant pis ! pensa Henri, elle l'*aura voulu* ! » et il dit tout haut : « Ecoute, Paule, je vais te parler franchement » (Beauvoir, *Les Mandarins*, p. 478)

(3) *conversation de deux enfants qui jouent aux vendanges avec des playmobils*

– alors moi je *prendrais* le tracteur et j'*irais* à la coopérative pendant que toi tu *couperais* des raisins

– ouais je *couperais* des raisins et je les *mettrais* dans la pâtière là...

On se propose de reprendre la question du parallélisme des emplois de ces deux temps pour en effectuer une étude contrastive *systématique*, à partir d'occurrences authentiques relevées dans divers genres du discours. On fera, pour ce faire, travailler l'hypothèse théorique selon laquelle le conditionnel est un temps *dialogique en langue*, alors que le futur a seulement des *emplois dialogiques en discours* :

– le futur, en tant qu'ultérieur du présent, calcule l'ultériorité du procès qu'il actualise, à partir du locuteur-énonciateur situé à t° : il n'est pas structuré sur un dédoublement énonciatif en langue, même s'il peut mettre en scène ledit dédoublement en discours dans les emplois dits modaux (conjecture, bilan, mitigation, etc...) ;

– le conditionnel, en tant qu'ultérieur du passé, pose à partir du locuteur-énonciateur situé à t° un autre énonciateur situé antérieurement, à partir duquel l'ultériorité se construit : il est structuré sur un dédoublement énonciatif en langue.

On testera si cette hypothèse peut rendre compte des identités comme des dissemblances d'emploi entre les deux temps ; ou si au contraire il convient de l'amender au vu des faits linguistiques que l'étude contrastive mettra en lumière.

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## A diachronic perspective of Portuguese Pluperfect

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The preservation, in Portuguese, of a verb form directly descendent from Latin (Simple) Pluperfect (e. g. *mostrara* < MONSTRARAM) is usually referred to as a particularly conservative feature of the language. Although in contemporary Portuguese this form is confined to literary (or otherwise very restricted) uses, the large number of attestations found in diachronic data seem to indicate that in earlier periods the Simple Pluperfect ('Pretérito-mais-que-Perfeito simples' – MPS) was commonly used. This reasoning should, of course, be tested in a careful analysis of the extant written records – since diachronic data is retrievable only in written texts, it is not possible to infer a direct relation between the number of attestations and the frequency of use in the language. But the typological diversity of the texts where the MPS occurs seems to indicate a non restricted use of the form, i. e., a use not restricted (roughly) by style or, more broadly, sociolinguistic factors.

The MPS is usually described as indicating «an action that occurred before another past action» (Cunha & Cintra 1984: 455), and it is therefore characterized as an «essentially anaphoric tense» (Lopes 1997: 661, Oliveira 2003: 161). As noted above, in contemporary Portuguese the use of the simple form is rare, but in ancient language states it is largely attested, not only to express the mentioned value (cf. 1) but also with values that can be generically characterized as modal (cf. 2 and 3).

1. *Nembrouse el Rey alboface~ de sas molheres e de seus filhos e (...) que trouuera* [bring-3sgMPS] [late 14<sup>th</sup> cent.] (King A. remembered his wives and sons and (...) that he had brought)
2. *ca sy asi cõtecera*. [happen-3sgMPS] *forades perdido*. [be-2pl MPS lose-PP] [late 14<sup>th</sup> cent.] (Because if it had been so you would have been lost)
3. *e nõ casou como deuera* [must-3sgMPS] [late 14<sup>th</sup> cent.] (And he did not marry like he should have)

While in other Romance languages (like Spanish, with specific differences concerning different varieties) this type of use was preserved, it disappeared in Portuguese (except for a few fixed expressions and marked uses), where it was entirely replaced by Subjunctive or Conditional forms. So in a diachronic perspective we must consider not only the evolution of the tense form (from simple to compound), but also the change that led to the semantic loss of the modal value of the MPS.

It has been suggested that the loss of originally (supposed) different values of the simple and compound forms, when expressing tense, could have led to the disuse of the former (Lopes 1997: 658), and an evolution parallel to that of the simple and compound forms of the Perfect ('Pretérito Perfeito') has even been hypothesised (Campos 2000, 2005). But these proposals do not consider the modal values once expressed by the MPS, since they only concentrate on supposed aspectual differences between the simple and compound form and, moreover, they do not extensively make use of diachronic data.

To approach the emergence of the compound Pluperfect naturally implies considering the grammaticalization process underwent by constructions with *haver* / *ter* 'have' (Imperfect) + Past Participle. At least until the 14<sup>th</sup> century, attestations of this construction are sometimes ambiguous, allowing either for a compound tense reading or for a preservation of the etymological value of the *haver* / *ter* verb, especially in cases where we have overt agreement (cf. 4 and 5).

4. *a mea nobre caualaria que eu auia prouada* [have-3sgIMP prove-femPP] *e~ muytas faze~das* [late 14<sup>th</sup> cent.] (My noble cavalry that I had (I 'possessed') and had come through / that I had tested in many occasions)

5. *estauã del mazelados porque os tinha soiogados* [have-3sgIMP submit-plPP] [late 14<sup>th</sup> cent.] (They were angry with him because he had them submitted / had submitted them)

But it also should be noted that in Old and Middle Portuguese unaccusative verbs regularly occur in formally parallel constructions with *ser* (in more accurate terms, verb forms derived from Latin ESSE) 'be' (as in French, f. i.) and these appear to be fully grammaticalized, alternating (with apparent freedom) with the simple form – cf. 6 and 7:

6. *soube ho comde como Mulley Abualle (...) partyra* [depart-3sgMPS] *de sua terra* [late 15<sup>th</sup> cent.] (The count knew that M. A. had departed from his country)

7. *logo foram avisados de como elle hera partydo* [be-3sgIMP depart-PP] [late 15<sup>th</sup> cent.] (They were immediately told that he had departed)

But yet another rather different issue has been signalled by historic grammarians that should be considered in a more comprehensive approach of this topic. By the 15<sup>th</sup> century, the 3<sup>rd</sup> person plural verb forms of both the Perfect and Simple Pluperfect had become indistinct, due to phonological change, as evidenced by many non etymological spellings. Forms like, f. i., *forom* (Perfect) and *foram* (Pluperfect), whose endings were before pronounced with two different nasal vowels (/õ/, /ã/), were no longer distinguishable as they had merged to a nasal diphthong. Although limited to a single person / number form, the role of this syncretism also has to be considered since in many contexts it virtually imposes the use of the compound form in order to, at least, avoid ambiguity.

My main objective is to present a more complete and coherent approach of the topic by reviewing previous studies / comments on the functioning and evolution of the MPS, and analyzing diachronic data retrieved in different types of textual sources (mainly from Old and Middle Portuguese). More specifically, I intend to identify the possible factors that led to the disuse of the simple form, hypothesising that these were different but mutually conditioning factors. Assuming the distinction between actuation and transmission of change, it will be argued that the change involved can be referred to as 'grammar initiated change' (Dressler 2003: 462), and that in this particular case it was determined by the concurrence of different grammatical factors that led to the obsolescence of the MPS.

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## THE INTERACTION OF TEMPORAL-ASPECTUAL FEATURES IN MODAL POLYSEMY: A CASE-STUDY FROM SICILIAN.

We intend to analyse a number of Sicilian constructions involving the modal *vuliri* “want” and the modal periphrasis *aviri a* “have to+ infinitive”. They are used to express both modal values and futurity (Sicilian, but not Italian, lacks a synthetic future).

Our analysis is largely based on Cognitive Grammar, according to which modality is a strategy of grounding, involving different kinds of *subjectification* (Langacker 1991; Traugott 1989), variously grammaticalised in languages. The scalar nature of grammaticalisation processes (Heine *et al.* 1991) also accounts for the polysemous behaviour of modals, as well as their intralinguistic overlapping. Modal meanings are frequently activated by other coordinates, concerning both the features of Transitivity (animacy of the subject, coded or implied agentivity, punctuality, telicity of the predicates, cf. Hopper-Thompson 1980; 2001) and the degree of grammaticalisation of the modal means.

Although *vuliri* and *aviri a* converge in the expression of two semantic cores, i.e. (1) Necessity and (2) Prediction, they express a different degree of grammaticalisation. In particular, *vuliri* is only partially grammaticalised and coexists with a lexical counterpart:

1. *A pasta voli cociri /a (a) cociri*  
The pasta want.PRS.3SG cook.INF/have.PRS.3SG (to) cook.INF  
“The pasta needs to be cooked”
2. *Voli chioviri /a (a) chioviri*  
want.PRS.3SG rain.INF / have.PRS.3SG (to) rain.INF  
“It will rain/It is going to rain”
3. *Iddu voli i puma / manciari / a (a) manciari/*  
He want.PRS.3SG the apple.PL/ eat.INF/ have PRS.3SG (to) eat.INF/  
\**Iddu a (a) puma*  
He have.PRS.3SG (to) apple

“He wants the apples/He wants to eat/He has to eat/ \*He has to apple”

We hypothesize that the grammaticalised uses of *vuliri* do not completely opacify the original semantics of volition and the metaphor which allows its extension from animate subjects to inanimate ones. Thus, the inanimacy of the subject plays a crucial role in determining the modal reading. Moreover, the basic “verbiness” of *vuliri* accounts for the almost exclusive connection with deontic (less grammaticalised, Sweetser 1990; Bybee *et al.* 1994) values, while an epistemic interpretation only arises under specific contextual constraints, i.e. when an agentive, human implication is radically excluded (as in 2, where a meteorological predicate is involved). On the contrary, *aviri a* is a fully grammaticalised means of modal expression, not sensitive to the animacy of the subject. Even if the general conditions of agentivity contribute in orienting the modal reading in a deontic or epistemic direction, they crucially interact with the temporal-aspectual patterns, which are a trivial variation for *vuliri*:

- 4 *Tu a (a) ffari comu dici iddu (deontic)*  
You have.PRS.2SG (to) do.INF as say.PRS.3SG. he  
“You must do as he says”
5. *Tu avisti a ffari comu dissi iddu (epistemic)*  
You have.PST.2SG (to) do.INF as say.PST.3SG. he  
“You must have had to do as he said”

The deontic value is commonly expressed with the present tense, while a past tense inflection moves the modal meaning towards an epistemic interpretation. This pattern is consistent with Langacker (1991) analysis of distal morphemes, as conveying some sort of non-immediacy, i.e. non-reality, in that the past inflection “pertains to the degree of likelihood rather than

temporal location” (Langacker 1991: 241). The interaction between transitivity features and temporal-aspectual modifications become more complex for the presence of actional constraints on the modalized proposition (Pietrandrea 2005): epistemic values are normally activated only by the use of *aviri a* with stative verbs, typically *essere* (to be) and *avere* (to have):

6. *Hannu a essiri i tri*  
Have.PRS.3PL. to be.INF the.PL three

“It must be three o’clock”

7. *Totò a’ a aviri i picciuli*  
Totò have.PRS.3SG. to have.INF. the.PL. money

“Totò must have the money”

On the other hand, temporal-aspectual and actional modifications do not wield any influence on the less grammaticalised *vuliri*.

Matches and mismatches in the domains of *vuliri* and *aviri a* can be interpreted assuming the existence of a modal continuity (deontic↔epistemic), both at the abstract level of modal categories’ typology and at the concrete one of their linguistic expression.

In particular, our aim is to provide an interpretation of the proposed data according to a multifactorial hypothesis of modality as a radial structure with a prototypical nucleus branching out into a complex of meanings, where transitivity, grammaticalisation, and temporal-aspectual shifts play a crucial role.

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## Beyond the Frege Boundary in the Event Domain

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In basic applications of *Generalized Quantifier Theory* (Barwise & Cooper (1981) *inter alia*), the DP *Every student*, in an English sentence like *Every student danced*, denotes a type  $\langle 1 \rangle$  generalized quantifier expressing a property of a unary relation, in this case, *DANCE*. Within the extension of GQ theory to relations of arity greater than one, sentences like *No student likes every book* can be analyzed as involving a type  $\langle 2 \rangle$  generalized quantifier, one that expresses a property of a binary relation, in this case *LIKE*. Of course there is no need to propose that *No student likes every book* involves a binary quantifier, since such a quantifier is straightforwardly reducible to the iteration of two unary (type  $\langle 1 \rangle$ ) quantifiers: First *every book* is applied to *LIKE*, and then *no student* is applied to the result. Binary quantifiers that are equivalent to iterated application of unary quantifiers are known as *Fregean* (or *reducible*) in the literature.

However, it has been observed for a long time that quantification within the domain of individuals in natural language goes beyond the Frege boundary, i.e. must be analyzed in terms of unreducible polyadic operators (van Benthem (1989); Keenan (1987; 1992)). For example, Keenan (1992) argues that the *different-different* construction (1) must be analyzed in terms of a binary quantifier, which he then proves to be unreducible.

(1) Different students answered different questions on the exam

Although the study of non-Fregean quantifiers is very developed within the individual domain, the question of whether properly polyadic quantification exists in other ontological domains has not yet been addressed. This question is important since both a positive or a negative answer to it would give valuable insight into the similarities and/or differences between the domain of objects and other domains such as the domain of events.

The goal of this paper is to argue that natural language makes use of unreducible binary quantifiers not only in domain of individuals, but also in the domain of events. We present a particular case of properly polyadic quantification involving events in French: the *Quantification at a Distance* (QAD) construction.

In French, members of a certain class of adverbial quantifiers, exemplified here by *beaucoup* ‘a lot’, may quantify over the direct object not only from a position adjacent to it (Canonical Quantification (CQ)), but also seem to quantify ‘at a distance’ from an adverbial position (3b).

- (3) a. *J’ai lu beaucoup de livres (CQ)*                      b. *J’ai beaucoup lu de livres (QAD)*  
I-have read a-lot of books                                      I-have a-lot read of books

‘I read a lot of books’

As noticed by Obenauer (1983), the QAD construction is subject to aspectual restrictions that the CQ sentence is not subject to. In particular, he argues that QAD involves quantification by the adverb *beaucoup* over the event argument of the verb. He shows that QAD sentences display a *multiplicity of events* requirement: they are only true in contexts involving many events. For example, Obenauer observes that QAD sentences with PPs that force a single-event reading of the sentence, like *en soulevant le couvercle* ‘lifting the lid’, are bad.

- (4) \**En soulevant le couvercle, il a beaucoup trouvé de pièces d’or*  
‘Lifting the lid, he found a lot of gold pieces’

We argue that, while QAD does involve event quantification, it also involves quantification by *beaucoup* over the direct object. We show that QAD sentences are subject to a *multiplicity of objects* requirement: they are only true in contexts involving multiple participants. For example, it

is impossible to utter (5) in a context in which I called only my own mother many times.

(5) # *J'ai beaucoup appelé de mères*

I-have a-lot called of mothers

This data is unexpected in analyses in which *beaucoup* is a pure event quantifier, and the direct object is existentially closed (cf. for example, Mathieu (2004)).

To account for the fact that *beaucoup* seems to be, at the same time, quantifying over the event variable and the direct object variable, we propose that, in QAD sentences, *beaucoup* is a binary quantifier  $BCP'$  over  $\langle \text{event}, \text{object} \rangle$  pairs, where the event argument is supplied by the verb, and the object argument is supplied by the *de* phrase. Informally speaking,  $BCP'$  imposes an ‘a lot’ requirement on both the domain and the range of the relation that it is applied to.

(6) For all  $R \in \mathcal{P}(E \times E)$ ,  $BCP'(R) = 1$  iff  $|\text{Dom}(R)| = \text{a lot} \ \& \ |\text{Ran}(R)| = \text{a lot}$ .

We argue that a polyadic quantifier such as  $BCP'$  is necessary for the analysis of QAD, since, as we show, quantifiers that impose such requirements on their domain and range are unreducible to any iteration of monadic quantifiers. We give a formal proof of the unreducibility of (a more formalized version) of  $BCP'$  using Keenan (1992)’s *Reducibility Equivalence* theorem.

(7) **Reducibility Equivalence (RE)** (Keenan (1992:211))

For  $F, G$  reducible functions of type  $\langle 2 \rangle$ ,  $F = G$  iff for all subsets  $P, Q$  of  $E$ ,  $F(P \times Q) = G(P \times Q)$ .

(7) says that, for two reducible binary quantifiers, if they behave the same way on the product relations, then they are the same function. We first show that  $BCP'$  takes the same value at the product relations as an obviously reducible quantifier: the composition of two occurrences of the generalized quantifier  $BCP^{GQ}$ .

(8) For all  $R \in \mathcal{P}(E_1 \times \dots \times E_{n+1})$ ,  $BCP^{GQ}(R) = \{ \langle a_1, \dots, a_n \rangle : | \{ \langle b : \langle a_1, \dots, a_n, b \rangle \in R \} | = \text{a lot} \} \}$

Therefore, by (7), if both these quantifiers are reducible,  $BCP' = BCP^{GQ} \circ BCP^{GQ}$ . We then show that  $BCP' \neq BCP^{GQ} \circ BCP^{GQ}$ ; in particular, they return different values on relations that are bijections, such as those that model the most salient reading of *J'ai beaucoup lu de livres*, where each event of ‘book-reading’ is paired with a distinct book. Since  $BCP^{GQ} \circ BCP^{GQ}$  is obviously reducible,  $BCP'$  must be unreducible.  $\square$

In summary,  $BCP'$  is unreducible because it is true of relations in which there are many events with few or even a single participant in each event, provided that the total number of participants is large enough to count as *beaucoup*. Since  $BCP^{GQ} \circ BCP^{GQ}$  is the iteration of two unary quantifiers, it builds in a scope dependency between the two  $BCP^{GQ}$ s.  $BCP^{GQ} \circ BCP^{GQ}$  is only true of relations in which there are many events with many participants. In QAD sentences; however, there is no such dependency. Based on this result, we therefore conclude that natural language quantification does, in fact, go beyond the Frege boundary in the domain of events.

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*Some Considerations about the Aorist in Ancient Greek.*

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The aim of this proposal is to discuss a new approach to the tense-aspectual and modal semantics of ancient Greek aorist.

The ancient Greek verbal system is very interesting for many reasons: it presents a rare opposition among three aspectual stems (“present”, aorist and “perfect”); its verbal morphology grammaticizes some aspectual oppositions, like bounded/unbounded or finished/unfinished, which other languages mean by lexicon or argumental structure.

This work would be an early attempt in formal analysis of tense-aspectual semantics in ancient Greek; it chooses aorist as main topic because all the not formalized approaches fail in defining it.

The discussion starts from the Ruipérez’s reconstruction of aspectual oppositions in Greek system. In his work of 1954 he defines two kinds of opposition: a general opposition between “present” + aorist and perfect, and a local opposition between “present” and aorist. Since aorist lacks an indicative present, Ruipérez says that present neutralizes the opposition “present”/aorist. The Ruipérez’s proposal suggests that the opposition “present”/aorist in other not indicative moods (subjunctive, optative, imperative, participle and infinitive) is not an aspectual fact.

My proposal agrees with the idea that there are two kinds of opposition in Greek, as Ruipérez said, but it also suggests that the opposition “present”/aorist is an aspectual one. The existence of two different forms for the present not indicative moods is an aspectual fact, but also the lacking of the present indicative aorist is an aspectual fact too.

The opposition “present”/aorist entails the existence of two different temporal systems. Since the temporal system of the “present” is deictic, it can have a past, a present and a future. On the contrary the temporal system of the aorist permits only an after/before location in time, because it is not deictic.

“Deictic” means that the temporal system of “present” entails a reference to the utterance moment  $n$ . The reference to  $n$  defines three kinds of relation between event time  $t$  and  $n$ : if the event time  $t$  is a part of  $n$  ( $t \subseteq n$ ),  $t$  is present, otherwise, if  $t$  is not a part of  $n$   $\neg(t \subseteq n)$ , then or  $t$  precedes  $n$  (past) or  $t$  follows  $n$  (future).

The lacking of the deictic reference to the utterance time  $n$  has an important consequence: an event time  $t$  can be distinguished from another event time  $t'$  if and only if it precedes or follows  $t'$  without having with  $t'$  an overlap relation. The lacking of a deictic anchorage to  $n$  for the aorist entails that it describes the events as temporal “atoms”, apart from the verbal class of the predicates.

Both these characteristics, the necessary precedence and the atomic description, reject the existence of the indicative present, because the part relation defines the present tense, but the lacking of the deictic reference blocks the part relation, and the temporal atomic point of view entails an eventual reference too much strong for the actual world.

For these reasons the indicative aorist can be only past or future, but it is possible to know the exact temporal location of an aorist if and only if it is possible to individuate an event time of another not aorist predicate, which acts as temporal “anaphoric” referent of the aorist, otherwise the aorist is detemporalized (Périsstérakis 1962 a, 1962 b).

The semantics of aorist rejects the indicative present but not the present of the other moods, because the not indicative aorist admits the logical existential possibility without relating this possibility and the temporal structure of the real world.

Many characteristics of aorist can be explicated assuming that it is not deictic and this proposal is also useful to understand the structure of the opposition “present”/aorist.

Following a suggestion from Mc Taggart (1901, now in Mc Taggart 1996), I define the aorist B-temporal and the “present” A-temporal. I propose that the opposition A-temporal/B-temporal is useful to analyze the tense-aspectual structure in natural languages.

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# Tense and Temporal Relations in Italian Text/Discourse.

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This paper presents a revision of tense interpretation in the text/discourse domain, i.e. tensed eventualities in adjacent sentences, and of its role for the identification of temporal relations. The account has been developed for Italian, but we claim that it can be extended to other languages. To illustrate its validity and to avoid the influence of other elements, such as viewpoint aspect, we will concentrate on discourse sequences presenting the tense forms of the *passato composto* and the *trapassato I*.

We have adopted a neo-raichenbachian analysis of tense semantics developed on Comrie (1985)'s seminal work. We distinguish between the basic temporal meaning of tense forms and their interpretation in the type of textual domain of occurrence (Smith, 2004). The original reichenbachian moment of reference  $R$  has been split in two: on the one hand, it represents a second deictic point necessary to describe the semantics of some tense forms, like the *trapassato I*, and, on the other hand, it is a representational device to account for the referential property of tense and assumed to be always simultaneous with the  $E$ . These two different meanings are represented, respectively, by the symbols  $R$  and  $Rpt$ . As for tense interpretation in the text/discourse domain, we claim that a further device is necessary which we will call *textual temporal anchor* (Bertinetto, 1986), represented by an  $A$ . The presence of the  $A$  gives rise to two further relations: one between the  $Rpt$  and the  $A$ , which accounts for the *textual interpretation of tense*, and another between  $Rpt$  and  $S$ , which is obtained by inferencing mechanisms and express the relation between the specific referred time where the eventuality occurs and the  $S$ . The status of the  $A$  is that of a parameter which need to be set during the process of text/discourse interpretation. As a default, the  $A$  is always set to  $S$ . In Table 1, we illustrate both the basic temporal meaning and the textual meaning of the two Italian tense forms we have taken into account; “=” stands for simultaneous and “<” for before.

*Table 1: Tense Forms and Tense Interpretation*

| Tense Forms      | Absolute Meaning                           | Tense Meaning in Text/Discourse   |
|------------------|--|---|
| Passato Composto | $(E < S) \wedge (Rpt = E)$                 | $(E < S) \wedge (Rpt = E) \wedge (Rpt < A) \wedge (Rpt < S)$                                  |
| Trapassato I     | $(E < R) \bullet (R < S) \wedge (Rpt = E)$ | $((E < R) \bullet (R < S)) \wedge (Rpt = E) \wedge (Rpt < A) \wedge (R = A) \wedge (Rpt < S)$ |

The temporal order of eventualities in a text/discourse can be determined by putting in relation their moments of reference,  $Rpts$ . Different sources of information (e.g. viewpoint aspect, lexical aspect, commonsense knowledge, temporal adverbs) can be identified as responsible for the activation of the mechanisms for determining the temporal order of eventualities. As for tense, we claim that this mechanism is strictly dependent on the correct setting of the  $A$  parameter.

Consider the following examples:

- (1) Marco è caduto<sub>{passato composto}</sub> • Giovanni lo ha spinto<sub>{passato composto}</sub>.  
*Marco fell. Giovanni pushed him.*  
 $[(E1 < S) \wedge (Rpt1 = E1) \wedge (Rpt1 < A1) \wedge (Rpt1 < S)] \wedge [(E2 < S) \wedge (Rpt2 = E2) \wedge (Rpt2 < A2) \wedge (Rpt2 < S)]$
- (2) Marco è caduto<sub>{passato composto}</sub> • Giovanni lo aveva spinto<sub>{trapassato I}</sub>.  
*Marco fell. Giovanni had pushed him.*  
 $[(E1 < S) \wedge (Rpt1 = E1) \wedge (Rpt1 < A1) \wedge (Rpt1 < S)] \wedge [((E2 < R2) \bullet (R2 < S)) \wedge (Rpt2 = E2) \wedge (Rpt2 < A2) \wedge (Rpt2 < S)]$

$$(Rpt2 = E2) \wedge (Rpt2 < A2) \wedge (R2 = A2) \wedge (Rpt2 < S)]$$

In order to establish what is the temporal order between the two eventualities in (1) and (2), we need to set the *A* parameter, i.e. assign it a value. Nevertheless, the setting of the *A* is varied and in particular: a) the first tensed eventuality always assigns the *A* the default value, i.e. *S* ; b) subsequent tensed eventualities may assign the *A* either the default value or the moment of reference of the preceding tensed eventualities, *Rpt<sub>i-1</sub>*

On the basis of two empirical studies on the salience of the sources of information involved when inferring temporal relations which has been conducted on 34 Italian subjects, it has emerged that in case of same tense sequences, like *passato composto* - *passato composto*, most subjects (53.26% for Experiment 1 and 70% for Experiment 2) did not consider tense as a salient source of information. The percentages are reversed for sequences with a tense shift, like *passato composto* – *trapassato I* (94.87% for Experiment 1 and 55.56% for Experiment 2). On the basis of these results, we claim that tense qualifies as a necessary and sufficient source of information for reconstructing the order of eventualities only in one case i.e. when a shift in the temporal meaning of the tensed eventualities is present. In case of sequences of eventualities with same tense meaning, other sources of information are preferred. According to our analysis, such a shift in temporal meaning offers a principled way to set the *A* textual parameter for subsequent sentences. In particular, in presence of a shift in tense meaning the *A* parameter corresponds to the moment of reference of the preceding tensed eventualities, *Rpt<sub>i-1</sub>*, while in case of a maintenance of the same tense meaning the *A* is set to the default value. Applying our principles to the previous examples we will obtain the following representations:

- (1) :  $[(E1 < S) \wedge (Rpt1 = E1) \wedge (Rpt1 < S)] \wedge [(E2 < S) \wedge (Rpt2 = E2) \wedge (Rpt2 < S)]$
- (2) :  $[(E1 < S) \wedge (Rpt1 = E1) \wedge (Rpt1 < S)] \wedge [((E2 < R2) \cdot (R2 < E2) \wedge (Rpt2 < Rpt1) \wedge (R2 = Rpt1))]$

In the example (1), both tensed eventualities set the *A* parameter on the same values. Tense, in this case, informs us that the two eventualities have occurred in a common temporal dimension, or Temporal Focus, but it is not sufficient enough to state what is the particular temporal relation between the two *Rpts*, which could be recovered by exploiting other sources of information like lexical aspect or commonsense knowledge, which may give rise to biased interpretation, since all possible temporal relation is available. On the contrary, in (2), the values of the *As* are different and, most importantly, *A2* is linked to *Rpt1*. The different setting of the *As* signals that the two eventualities occurred in two different Temporal Focuses, which stand in a particular temporal relation as marked by tense, which offers all the necessary and sufficient information to establish the precise temporal relation between the eventualities, i.e.  $E1 < E2$ .

The novelty of this approach resides in the fact that tense absolute temporal meaning and its interpretation in context are kept distinct and analyzed by means of specific devices. The results of the empirical study had shed new lights on the role and conditions under which tense is a salient source of information for the identification of temporal relations between eventualities in a text/discourse and also offered a principled and sound way to set the values to the *A* parameter. It is important to point out that the machinery behind the setting of the *A* is grounded on differences in temporal meaning of the various tense forms and not due to anaphoric relations between the various moments necessary to describe the temporal meaning of the various tense forms.

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### ***for*-adverbials quantify over subintervals, not subevents**

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A well-known descriptive generalization states that *for*-adverbials such as *for two hours* are incompatible with telic predicates (e.g. Vendler, 1957; Verkuyl, 1972). Clearly, *for*-adverbials require the predicate to have a certain property which no telic predicate has. But there is no consensus on what that property is. Simply saying that this property is atelicity just postpones the problem, as there is also no consensus on how (a)telicity ought to be formally defined. I argue that *for*-adverbials require the predicate to be true at each relevant subinterval of the time span in question (**subinterval property, SIP**). For example, my translation for *for two hours* is as follows:

$$(1) \quad \lambda P \lambda e. \exists t [hours(t) = 2] \wedge \forall t' [t' < t \wedge t' \in Cov \rightarrow \exists e' [e' < e \wedge P(e') \wedge runtime(e') = t']]$$

This states that *for two hours* converts any event predicate  $P$  into an event predicate that holds of any event  $e$  such that for each relevant part  $t'$  of a two-hour-long time interval  $t$ ,  $e$  has a subevent of which  $P$  holds and which happens at  $t'$ . Following Schwarzschild (1996), I use a contextually given cover  $Cov$  to determine which parts of  $t$  are relevant.

The idea that *for*-adverbials enforce SIP is not new (e.g. Dowty, 1979; Moltmann, 1991). However, subsequent authors (Krifka, 1998; Kratzer, 2007) disagree. In their view, *for*-adverbials require the predicate to be true of all shorter subevents of any event it describes (**subevent property, SEP**). In this paper, I offer novel arguments in favor of the SIP property. Moreover, I refute in detail the arguments that led Krifka to choose SEP over SIP.

SIP and SEP differ in their predictions with respect to certain predicates that contain two incremental themes, one bounded and one unbounded:

- (2) a. Wine flowed from the jar to the floor for five minutes. (Beavers, 2008)
- b. Snow fell throughout the area for two straight days. (attested example)<sup>1</sup>

Both sentences require that the predicate they express (i.e. the denotation of the sentence without the *for*-adverbial) holds continuously throughout the interval they mention. This is consistent with SIP. But the predicate in (2a) violates SEP. For example, it does not hold of any shorter subevents in which wine flowed only halfway towards the floor. Sentence (2b) contains an extent predicate (Gawron, 2005). It violates SEP as well, because it does not hold of any subevents in which snow fell only on parts of the area for, say, only one day.

Krifka explicitly rejects SIP for two reasons: **First**, he argues that “[t]imes may have a structure that is too fine-grained for certain events. For example, *Mary ate apples for an hour* does not require that every time  $t$  included in the run time of an event of eating apples  $e$  is the run-time of some apple-eating event by Mary.” Presumably, Krifka assumes that certain things Mary does during a very short time do not qualify as apple-eating events. If this is correct, it is indeed a problem for SIP. To accommodate it, SIP would need to be relativized so that it ignores events with very short duration. But we need to do this anyway. For example, a predicate like *waltz* is compatible with *for*-adverbials. But any waltzing event entails the existence of short events which do not constitute waltzing, for example, putting one’s right foot forward – the *minimal-parts problem* (Dowty, 1979). Worse, this problem most likely applies to SEP as well, as there is no evidence against the plausible intuition that these events are **parts** of the waltzing event. So

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<sup>1</sup>Source: <http://community.lawyers.com/forums/t/17235.aspx>

we need to exclude these events regardless of which condition we adopt, be it SIP or SEP. As a concrete proposal, the entry in (1) uses contextually given covers to exclude events whose duration is very short. I assume that these durations are irrelevant and will not be in the cover. Regardless of how the minimal-parts problem is solved, its existence does not bear on the choice between SIP and SEP.

**Second**, Krifka and Kratzer note that there is some leeway in how *for*-adverbials can be understood. If John sang from 3pm to 5pm, and Mary sang from 4pm to 6pm, then John and Mary can be said to have sung for either three or four hours. The latter interpretation is favored if John and Mary are paid for their singing individually by the hour. (Note that in this scenario, there are subevents as well as subintervals at which only John sings. Something seems to cause SIP/SEP to ignore the subject. This does not bear on the choice between SIP or SEP, however.) Krifka (1998) takes this to be an argument for SEP. In his formalization, *for an hour* involves a function that maps the event in question onto its duration in hours. In order to leave room for the leeway, Krifka deliberately leaves open how that function is defined in detail. However, this account misses a generalization. As Krifka himself observes in a separate context, measure expressions in nominal constituents can delimit either the noun or the event (Krifka, 1992). For example, (3a) can be understood either as saying that 4000 *different* ships passed through the lock, or that there were 4000 events of a ship passing through the lock. On that reading, the same ship could be counted more than once.

- (3) a. Four thousand ships passed through the lock
- b. John and Mary sang for four hours

If we assume SIP, then (3a) and (3b) are both parallel – they both distribute the VP over the parts of the measure expression (*4000 ships* and *4 hours*). The null hypothesis is that the ambiguity occurs no matter whether the measure expression occurs in an argument, as in (3a), or in a *for*-adverbial, as in (3b). This predicts the two readings of (3b): in one reading, singing happens during four *different* hours; in the other reading, there are four one-hour singing events. Since any two-hour singing event has two one-hour singing subevents, this is true in a scenario where John sang from 3pm to 5pm, and Mary sang from 4pm to 6pm.

**In conclusion**, predicates with multiple incremental themes provide a novel argument that *for*-adverbials quantify over subintervals, following Dowty (1979) and Moltmann (1991), as opposed to subevents. I refute Krifka (1998)’s arguments to the contrary. They are based on phenomena for which independent accounts have been proposed. These accounts are compatible with quantification over subintervals as well as subevents.

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## The markedness of State in Japanese

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One of the main properties that determine the eventuality structure of a clause is the event/state distinction (Vendler 1957). While states are simply properties that hold of an individual at a time, events are dynamic situations characterized by heterogeneity. It is usually argued that events are semantically more complex than states. This complexity is often argued to be expressed within the syntax, either as a syntactic Event head (e.g., Travis forthcoming) or as morphosyntactic markedness of Event over State (e.g., Cowper 2005). In this talk, we present evidence that this is not always the case. In Japanese, it appears that State is the marked feature of the state/event pair. The interaction of Japanese verb types with auxiliary constructions indicates that these constructions contribute a marked stativity feature. This indicates that events are not intrinsically more marked than states, at least syntactically; languages appear to be parameterized with respect to which of the pair is the default feature.

Cowper (2005), in her study of the aspectual properties of English and Spanish, explicitly takes Event to be a marked feature of the inflectional head of a clause (Infl), meaning that clauses are stative by default (via underspecification). This does appear to be the case in English, as many canonically stative verbs (1) can be interpreted as eventive when they appear with imperfective morphology (2). According to Cowper, the English imperfective suffix *-ing* realizes the morphosyntactic feature Interval, which is a dependent of the feature Event in her feature geometry of Infl. Thus, when a canonically stative verb appears with the imperfective suffix, the verb is interpreted as an event.

Japanese, like English, makes a syntactic distinction between eventuality types. In addition to states and events, Japanese also has a third class of verbal roots called stative potentials (Nightingale 1999), which Clarke (2005) analyzes as uncategorized roots rather than true verbs (and therefore neither stative nor eventive). Each of the three verb classes displays a unique co-occurrence pattern with two auxiliaries: *iru* ‘to be’ and *shimau* ‘to finish/put away.’ The fact that these verb types have unique distributions indicates that stativity and eventiveness of a particular verb is syntactically relevant in Japanese. However, these co-occurrence patterns indicate that, unlike English, it is State, and not Event, that is marked in Japanese.

We show that the Japanese auxiliary construction *V-te iru*, the resultative/ongoing construction, turns a predicate into a state, and *V-te shimau*, the completive construction, compresses an eventuality to an achievement (i.e., an instantaneous change of state, following Vendler (1957)). *V-te iru* can attach to any non-stative predicate (3), while *V-te shimau* can only attach to eventive verbs and is ungrammatical with states or stative potentials (4). In other words, the stative auxiliary construction (*V-te iru*) is only available for non-stative predicates, and the eventive auxiliary construction (*V-te shimau*) is only available for eventive predicates. This distribution (5), we argue, indicates that stativity is the marked feature. If eventiveness is unmarked, then underspecification would permit the addition of a stative feature to an eventive verb complex. This appears to be what happens when the *V-te iru* construction is used with an eventive verb: the merging of *iru* with a non-stative (and thus underspecified) verb adds a stative feature to the verbal complex, yielding a state. The addition of this feature to an already stative

VP would be vacuous, as the stative feature would already be present in the verbal complex. In the case of the *V-te shimau* construction, the auxiliary *shimau* is eventive, and thus would be aspectually underspecified. When merged with an eventive main verb, it compresses the event to an achievement without adding any morphosyntactic features. However, *V-te shimau* cannot yield an event when merged with a stative (and thus marked) verb because the unmarked eventiveness cannot override the marked stative feature. The *V-te iru* construction creates a state out of anything that is not a state by the addition of a stative feature, and the eventive *V-te shimau* construction cannot be used with anything that is not already an event. This, we conclude, indicates that in Japanese, State is a marked morphosyntactic feature.

### Examples

- (1) a. Dave is a jerk. b. I love him.  
 (2) a. Dave is being a jerk. b. I'm loving him more and more.  
 (3) a. Akiko-ga hon-o **yo-ndei-ru.** (eventive verb)  
       Akiko-nom book-acc read-te be-nonpst  
       'Akiko is reading a book.'  
       b. \*Akiko-ga uchi-ni **i-te i-ru.** (stative verb)  
           Akiko-nom house-dat be-te be-nonpst  
       c. Akiko-wa yomi-kaki-ga sugure-**te i-ru.** (stative potential)  
           Akiko-top read-write-nom be.excellent-te be-nonpst  
           'Akiko is excellent at reading and writing.'  
           \*‘Akiko is being excellent at reading and writing.’  
 (4) a. Taroo-ga ringo-o **tabe-te shima-tta.** (eventive verb)  
       Taro-nom apple-acc eat-te put.away-pst  
       ‘Taro completely ate the apple up (unfortunately).’  
       b. \*Tookyoo-ni **i-te shima-tta.** (stative verb)  
           Tokyo-ni be-te put.away-pst  
           [Intended] ‘I ended up being in Tokyo.’  
       c. \*Yoku benkyoo shi-ta ga, **arifure-te shima-tta.** (stative potential)  
           Often study do-pst but be.mediocre-te put.away-pst  
           [Intended] ‘I studied frequently, but I was completely/ended up being mediocre.’  
 (5) The co-occurrence patterns of Japanese verb classes with auxiliary construction:

|                         | States | Events | Stative potentials |
|-------------------------|--------|--------|--------------------|
| <b>Independent</b>      | Yes    | Yes    | No                 |
| <b>With V-te iru</b>    | No     | Yes    | Yes                |
| <b>With V-te shimau</b> | No     | Yes    | No                 |

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## Maximal interpretation of temporal and spatial adverbs

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That temporal and spatial adverbs can have parallel interpretations and share a complex relationship has been explored at some length (for example, *inter alia*, Boroditsky 2000, Matlock, Ramscar and Boroditsky 2005, Csirmaz 2008); adverbs that make available or that obligate a maximal interpretation constitute a set of adverbs that allows for exploration of the complex relationship between spatial and temporal modification. We focus on the maximal interpretations of durative adverbs and evaluate their relationship with spatial corollaries in order to demonstrate that there is a non-transparent relationship between maximal interpretation of spatial and temporal adverbs.

In (1), there appears to be a transparent relationship between the spatial interpretation (SI) and temporal interpretation (TI) of the English durative adverb *for*, and in (2) and (3), there is an evidently transparent relationship between the SI and TI of the English punctual adverbs *in* and *within*, respectively.

- 1.a. Rob walked for a mile
- b. Rob walked for an hour
- 2.a. Rob came to the house in a mile
- b. Rob came to the house in an hour
- 3.a. Rob found the deer within a mile
- b. Rob found the deer within an hour

We assume that the relationship between the SI and TI for punctual adverbs is more transparent (is more parallel) than that between the interpretations of durative adverbs. The non-transparency of the relationship between SI and TI for durative adverbs can be seen readily with adverbs that introduce maximal interpretations. Consider the Hungarian data in (4) (adapted from Csirmaz 2008), highlighting differences between the interpretations of the homogeneous adverbs *át* and *keresztül*, the latter of which introduces maximality in its SI and its TI.

- 4.a. *János két órán [keresztül] / [át] olvasott*  
J-NOM two hour-on through / across read  
‘Janos read for two hours’ (he did not take breaks, but read continually with *keresztül*,  
whereas he may have taken breaks with *át*)
- b. *A víz [keresztül] / [át] folyt a csövön*  
the water through / across flowed the pipe-on.  
‘The water flowed through the pipe’ (the pipe is full of the flowing water with *keresztül*,  
whereas with *át*, it may just be a trickle along the bottom of the pipe)

In (4), maximal interpretations are obligated by *keresztül*, whereas maximal interpretations are not obligated by *át*. There is something similar about the way in which the reading in (4a) may or may not be interrupted—that is, all the time is or is not filled with reading—and the way that the pipe in (4b) must be totally full or not, but it is less straightforward than the way in which the SIs and TIs are related in (2) and (3).

**Types of Maximal Interpretation. Iteration.** Hungarian *keresztül* introduces a maximal TI in iterative eventuality descriptions, as seen in (5) (adapted from Csirmaz 2006). An iterative maximality amounts to an interpretation that either does not allow gaps or that does not allow irregular gaps (Csirmaz 2006). Something similar, but not exactly the same can be seen with English *throughout* in (6), which favors (although probably doesn’t require) iterative maximality similar to that stipulated by Hungarian *keresztül*.

5. *János tíz éven keresztül tanult szaxofonozni.*

J-NOM ten year-on through learned saxophone-V-INF

‘Janos learned (at regular intervals) to play the saxophone for ten years’ (note that if *keresztül* were replaced with *át*, the iteration of the event could be interpreted to be at irregular intervals.)

6. Janos played with the symphony throughout ten seasons.

*Duration.* The TI of Hungarian *keresztül* (unlike *át*; and similarly, of English *throughout*, unlike *for*) also includes maximality in non-iterative constructions, when it applies to duration, as seen above in (4a).

*Extent.* The SI of Hungarian *keresztül* (unlike *át*; and similarly, of English *through*, unlike *across*) includes maximality in the extent of the theme that is affected, or the amount of space occupied or contained by the theme, as seen above in (4b).

*Dimension.* The final maximal interpretation to be discussed is the dimensional SI of English *through* and *across* (Hungarian *keresztül* and *át* have similar interpretations, but with an important difference addressed in the presentation, but not in this abstract). *Through* introduces an obligatory additional dimension in its SI, which we interpret as a maximal interpretation in relation to dimension. In (7a) and (7b) *the forest* and *the lake* have only two obligatorily relevant dimensions when *across* is used—that is, *the bird* or *the diver* only interact obligatorily with the object it or he is crossing as a two-dimensional object that must be traversed. A third dimension is optionally relevant: the diver may be swimming on top of or may be submersed in the water in (7b) and the bird may be flying above or among the trees in (7a). However, when *through* is used instead of *across*, *the forest* and *the lake* obligatorily have three relevant dimensions: the reading that the diver may be on the surface of the lake or that the bird may be above the trees is not available with *through*. Thus, *through* introduces a maximal interpretation of the number of relevant dimensions that are available with its non-maximal counterpart *across*.

7.a. The bird flew [through] / [across] the forest.

7.b. The diver swam [through] / [across] the lake.

There is also at least one example (from English) where the maximal number of dimensions is two.

**Observations.** *Boundaries.* Durationally maximal TIs and dimensionally maximal SIs set boundaries for the eventuality description in time or space, respectively. Iterative and extent maximality do not similarly set boundaries.

*Countability/Quantifiability.* Iteratively maximal TIs and extent-maximal SIs can be said to modify something countable/quantifiable: the number of iterations in the case of the former and the quantity of the maximally-affected theme in the latter case. Durational and dimensional maximality do not similarly relate to countable/quantifiable items, although their internal extent may be countable or quantifiable.

**Conclusion.** The similarities between TIs and SIs of adverbs can be illustrated by observing the various possible maximal interpretations within each, but these maximal interpretations also illustrate that at least some of the similarities between temporal and spatial modification are non-transparent. A further question concerning the difference in scope between maximal TIs and SIs is how the difference between temporal and spatial modification may be regularly and simply explained.

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## Aspect, espace et prédication multiple

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C'est une banalité de dire que les éventualités<sup>1</sup> se manifestent à un indice temps × lieu, observation formalisée déjà dans la grammaire de Montague et reprise par la DRS de Hans Kamp (1993) et par la SDRT de Asher / Lascarides (1993, 2003). Pourtant, à part l'affirmation que ce lien existe, le plus souvent, les études dédiées au temps laissent de côté les relations spatiales, tandis que les recherches sur la prédication spatiale ne s'occupent ni du temps ni de l'aspect. Le but de notre étude est de voir, à l'aide d'un corpus électronique, quelles sont les informations spatiales qui déclenchent la prédication multiple (conçue comme une quantification sur les éventualités), quels sont les rapports géométriques entre les entités impliquées et s'il y a des conséquences, pour des prédicats exprimant divers mode d'action, dans le choix du temps et de l'aspect.

L'opposition entre une prédication au singulier et une prédication multiple consiste dans la différence entre une prédication qui dénote une seule éventualité (*Paul est entré en coup de vent dans la chambre, Victor et Dora ont déplacé ensemble la table*) et un syntagme verbal qui désigne plusieurs prédications, qui peuvent être itératives (*elle assiste chaque dimanche à la messe*), distributives (*chacun a bu une tasse de café*), collectifs (*une foule de gens étaient venus*). (cf. Lasersohn, Peter 1990, 1998).

La prédication multiple représente un cas de quantification sur les événements. Une éventualité multiple exprime une situation complexe,  $E$ , constituée de l'union de deux ou plusieurs sous-situations. Un tel traitement permet de faire la distinction entre deux niveaux, le niveau de chaque sous-événement ( $e_1, e_2, e_3 \dots e_n$ ) et le niveau de l'événement complexe  $E = e_1 \oplus e_2 \oplus e_3 \oplus \dots \oplus e_n$ .

Nous avons présenté ailleurs les relations qui peuvent exister entre le mode d'action, les noms argumentaux au pluriel (surtout le sujet et les compléments d'objet direct ou indirect), ainsi qu'au rôle de différents items (*ensemble, séparément, chaque, tout, ...*) dans l'expression d'une quantification sur des éventualités.

Les rapports spatiaux entre divers objets sont exprimés dans la langue de façon relationnelle, sous la forme d'une prédication communiquant la position d'une certaine entité (la cible) par rapport à un lieu (le site).<sup>2</sup> Dans la géométrie cognitive naïve que sous-entend ces relations, Andrée Borillo (1998) a distingué les relations topologiques (si la cible est située dans une portion d'espace ayant une certaine coïncidence avec le site: *la bouteille (C) est sur la table (S), la blouse (C) est dans l'armoire (S)*) des relations projectives (qui se manifestent si la position de la cible est identifiée par rapport à un site qui lui est extérieur: *la maison (C) est aux environs de Versailles (S), Marie (C) est assise à gauche de sa mère (S)*, etc.).

Si on examine le comportement des verbes et des syntagmes verbaux exprimant divers modes d'action par rapport à l'information spatiale, on constate que les oppositions dynamiques vs. non dynamique d'un côté et téléique vs. non – téléique de l'autre ne sont pas symptomatiques. Pour les états et les processus, l'espace forme, d'habitude, un arrière plan

<sup>1</sup> Parce que le terme 'événement' semble suggérer des prédications dynamiques (téliques ou non), Emmon Bach (1986) a proposé le terme 'éventualité' pour désigner conjointement les prédications statiques et celles dynamiques. Nous avons employé ce terme pour désigner l'ensemble des prédications, à côté du terme 'structure prédictive', introduit par Carlota Smith (1991).

<sup>2</sup> Les termes de 'cible' et de 'site' ont été proposés par Vandeloise (1986), comme traduction des mots anglais 'figure' et 'ground' (Talmy 1983). Cette terminologie se retrouve dans la psychologie perceptive ('figure' et 'fond') ainsi que dans la grammaire cognitive de Langacker ('trajector' et 'landmark'), où 'trajector' désigne l'entité mobile sur une trajectoire, par rapport à une 'borne' ou 'point de repère' ('landmark') (Vandeloise 1986: 44). On pourrait ajouter, pour l'anglais, les termes 'theme' vs. 'reference object' (Jackendoff 1983). En français, Boons (1985) a proposé les termes 'corrélât de lieu' vs. 'lieu', mais il paraît que les termes corrélatifs 'cible' vs 'site' sont les plus employés (Vandeloise 1986, Borillo 1998).

(dans le sens de Asher/ Lascarides 1993), constituant une sorte de cadre, immobile, à l'intérieur duquel les prédications se manifestent. Du point de vue géométrique, les relations entre les cibles et les sites sont principalement topologiques.

Dans le cas des états, la prédication spatiale exprime le fait qu'une ou plusieurs entité(s) occupe(nt) une certaine position dans l'espace (le site): *il y a plusieurs cabarets (cible) derrière la petite église (site)*. Le possible changement d'emplacement d'un processus se réfère au fait que l'entité en mouvement reste ou ne reste pas dans la même sous-partie du lieu: *les mêmes lucioles (cible) courraient au ras de la côte (site)*

Du point de vue du rapport avec l'espace, il existe deux grandes classes de verbes téliques. Une première catégorie exprime un rapport spatial tout à fait similaire à celui qu'on trouve pour les états et les processus: les informations spatiales constituent le cadre de manifestation de la prédication, l'espace n'y est pas directement impliqué: *ils apportent et disposent devant leur assiette (site), une foule de flacons, de tubes et de boîtes (cible)*.

Dans le deuxième cas, l'information spatiale est une partie essentielle de la prédication, puisque les cibles se déplacent à l'indice temps  $\times$  lieu: *au coin d'une de ces rues, ils (cible) arrivèrent à ce petit bar (site)*. Les prédications téliques expriment, du point de vue spatial, surtout des relations projectives.

À la fin de l'article nous esquissons un traitement formel de la prédication multiple déclenchées par les informations de type spatial comme hypostase de la quantification sur des éventualités.

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## On the Relationship between the Properties of Atelicity and Partitivity. The Case of Romanian

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(A)telicity is an aspectual property compositionally computed at the level of VP/IP and the distinction between these properties depends both on the lexical semantics of the predicate and on the “description” applied to the object of the verb (cf. Krifka 1998).

The aim of the paper is that of analyzing the induced atelic property on Romanian verb phrases that select theme arguments preceded by partitive prepositions such as: *din*/lit. from, *la*/lit. at, *prin*/lit. through. With the exception of state, achievement and semelfactive verbs, all the other classes of verbs that describe durative events which involve a change in degree of a gradable property of their objects (in the sense of Kennedy 2002) occur with partitive noun phrases (e.g., strictly incremental verbs: *a mânca*/eat, *a construi*/build, *a compune*/compose; incremental verbs: *a citi*/read, *a spăla*/wash, *a mătura*/sweep, *a bea*/drink, *a lua*/take, *a examina*/examine; scalar verbs as a whole class: *a topi*/melt, *a goli*/empty, *a seca*/dry) as illustrated in (1a-d). The prepositional noun phrases form partitive/non-quantized nominals and are distinct from the English “oblique variant” of the conative alternant. Romanian lacks the standard conative construction understood as “some attempt at a change of state” (cf. Levin 1993, Beavers 2007) (e.g., *I cut at the rope*/\**Am tăiat la sfoară*). In Romanian (and other Romance languages) atelicity is achieved by three means: (A) by the application of the imperfective aspectual operator (i.e., grammatical aspect, signaled by specific tense morphology of the verb in the present/imperfect tenses), (B) by the presence of a mass noun or bare plural direct object (Dowty 1979, Kennedy 2002, Rothstein 2008) and (C) by the presence of a partitive preposition preceding either a non-quantified count noun or a mass noun (i.e., bare partitives) in co-occurrence with a verb in the Perfect Compus (PC) (basically a perfective tense but in fact an aspectually and temporally complex tense, very close to the French Passé Composé, cf. Caudal 2006) as in (2-4). With respect to the example in (4) it is to be noticed that, different from French or Italian which have prenominal “partitive articles” (e.g., *Elle a mangé du gâteau/de la tarte/des biscuits*, where the partitive article creates ambiguity between a partitive and an indefinite reading of the NP) Romanian has a suffixal definite article (e.g., *măr(u)l/the apple*). In Romanian, a non-modified noun preceded by a preposition is necessarily used without a surfaced definite article, and when the preposition is partitive the reading of the complex noun phrase is that of *quantitative indeterminacy*. (A syntactic analysis of Romanian article drop in terms of incorporation with the preposition is offered in Mardale 2006).

As far as the statement in (A) is concerned, we clearly distinguish between atelicity, a property that applies at the VP/IP level and the imperfective viewpoint operator which is used to focus on some internal part of the eventuality (Caudal 2006) and contributes the partitivity condition yielding *partial* states, processes or events (Filip 2000).

According to the standard line of analysis (Kupferman 2004, Cardinaletti and Giusti 2006, Nedelcu 2009) the partitive construction has the following structure: Am băut (mult)<sub>IndefDet1</sub> [vin/Ø] *din*<sub>PartPrep</sub> (acest)<sub>Det2</sub> vin / I drank (much) [wine/ Ø] of (this) wine. The partitive preposition, a semantic predicate, operates the part-whole relationship between the indefinite quantitative determiner (*mult/much*) which licenses the prepositional complement (*din vin/of wine*) and the entire complex nominal is non-quantized, a feature that percolates at the level of VP. The nominal that designates the whole out of which a unit of partition is extracted must be a plural noun or send to the idea of plurality (i.e., a mass noun interpreted as lexical plurality, cf. Chierchia 1998). Consider the predications in (5a-b), which are atelic and compatible with

homogeneous temporal phrases. Although the complex noun (*din*) *plăcintă*/(*of*) *pie* in (5b) is articleless, in Romanian it is interpreted as a count, definite DP with an individual <e> type denotation, distinct from its occurrence in a construction such as *Am mâncat plăcintă* / *I ate pie*, where the nominal is an indefinite NP with a property <e,t> type denotation. When the quantitative determiner is lexicalized as *o parte din*/ *a part of*, *un strop din*/ *a drop of*, *un sfert din*/ *a quarter of* as in (6) the complex nominal becomes quantized as it contains a unit of measurement (Rothstein 2008) and the whole VP is quantized. We also analyze the non-quantized and quantized readings of the preposition *la*/lit. at and of the preposition *prin*/lit. through when interpreted as path measure.

- (1) a. Au demolat *din* clădiri în acest cartier ani la rând  
(They) have demolished *from* buildings in this district years on end  
They demolished part of the buildings in this district years on end
- b. Am citit Soniei *din* "Print și Cerșetor" două ore  
(I) have read to Sonia *from* "Prince and Pauper" for two hours  
I read Sonia "Prince and Pauper" for two hours
- c. A secat *din* lac în lunile de vară  
Has dried *from* lake during the months of summer  
The lake dried partially during the months of summer
- (2) Mănânc (Pres) un măr / Mâncam (Imp) un măr  
(I) am eating an apple / (I) was eating an apple
- (3) Maria mânca (Imp) mere / pâine de o oră // Maria a mâncat (PC) mere / pâine o oră  
Mary had been eating apples / bread for an hour // Mary ate apples / bread for an hour
- (4) Maria a mâncat (PC) *din* măr / *din* pâine o oră  
Mary ate *from* apple / *from* bread for an hour  
Mary ate of the apple / of the loaf of bread for an hour
- (5) a. Am ales *din* cărți toată după amiaza  
(I) have chosen *from* books all the afternoon  
I spent the whole afternoon choosing of the books
- b. Am mâncat *din* plăcintă o zi întreagă  
(I) have eaten *from* pie the whole day  
I ate of the pie the whole day
- (6) Am băut un sfert / un strop *din* vin în câteva minute  
(I) have drunk a quarter / a drop *from* wine in a couple of minutes  
I drank a quarter / a drop of wine in a couple of minutes

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## Language documentation and verb inflection typology: the case of Akhvakh (Nakh-Daghestanian)

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Precise descriptions of so far under-documented languages are crucial for a better understanding of linguistic diversity. In my talk, I will examine the contribution of Akhvakh, (a Nakh-Daghestanian language belonging to the Andic (sub-)branch of the Nakh-Daghestanian family) to a general typology of the distinctions expressed in verb inflection. Akhvakh provides particularly interesting data on the following two points: (a) finiteness and the *syntax-morphology* interface, and (b) the relationship between *conjunct/disjunct systems* and evidentiality.

(a) Akhvakh has participial relative clauses headed by verb forms that can also head independent clauses. Akhvakh data contradict the inflectional approach to finiteness according to which finiteness as a clausal feature necessarily correlates with the morphological structure of verb forms, and support a constructional approach to finiteness. In particular, the formulation of a general definition of participles must be compatible with the fact that forms found in relative clauses in which they behave at the same time as verbal heads and as adjectival dependents of a head noun may also head constructions having a different status with respect to finiteness.

(b) Morphological variations of verbs involving a binary choice with a 1 vs. 2/3 person contrast in declarative clauses and a 2 vs. 1/3 person contrast in questions have been labeled *conjunct/disjunct systems* by Hale 1980, and have been first described for Tibetan, Newari, and a few other Tibeto-Burman languages (Hale 1980, DeLancey 1986, DeLancey 1990, DeLancey 1992, Genetti 1994, Hargreaves 2005, Bickel 2008, Tournadre 2008). Similar patterns have also been found in the Mehweb dialect of the Nakh-Daghestanian language Dargwa (Magometov 1982), in Awa Pit, a Barbacoan language spoken in Colombia and Ecuador (Curnow 2002), and in the Papuan language Oksapmin (Loughnane 2007). In Akhvakh, verbs in the perfective positive (and only in this tense) show variations that at first sight express person distinctions. However, the choice between the two endings of the perfective positive *-ada* and *-ari* expresses a *1st p.* (*-ada*) vs. *2nd/3rd p.* (*-ari*) contrast in declarative clauses, but *2nd p.* (*-ada*) vs. *1st/3rd p.* (*-ari*) contrast in questions, and follows a split intransitive pattern: transitive verbs agree with A, whereas intransitive verbs divide into S<sub>A</sub> verbs agreeing with S in the same way as transitive verbs with A, and S<sub>p</sub> verbs invariably showing the ending *-ari*. This division of Akhvakh intransitive verbs into two classes transparently reflects the degree of control of the participant encoded as S. Consequently, the function of *-ada* is to encode *assertor's involvement*, i.e., coincidence between the controller of the event and the SAP responsible for the assertion (the speaker in declarative speech acts, the addressee in questions), which can be viewed as a particular case of evidentiality.

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## Telicity, particles and variable scales

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**Source of telicity.** It is often argued that the lexical entries of verbs may encode telicity. Recently Rappaport Hovav (RH) 2008 and Kennedy and Levin (K&L) 2008 have argued that this holds for at least a subset of verbs (for verbs with associated two-point scales (RH 2008) and verbs with closed scales (K&L 2008); also cf. Filip 2008). Data from Hungarian shows that this is not universal; in some languages, verbs fail to introduce telicity via their lexical specification.

In Hungarian, telicity can arise if some other element (e.g. a particle or PP) is also present, but not otherwise. Accordingly, telic interpretation is impossible if a particle (underlined) is absent in (1). This holds even for verbs denoting two-point scales (achievements, (1a,b)); verbs with a definite strict incremental theme (1c), and verbs with closed scales (1d).

- (1)a    Feri            \*(meg)    hal-t            /    Feri            hal-dok-lott  
           Feri-nom    particle    die-past.3sg    /    Feri-nom    die-iterative-past.3sg  
           'Feri died' (TELIC) / 'Feri was dying' (ATELIC)
- b    Feri            \*(el)            ér-te            a    csúcsot  
           Feri-nom    particle    reach-past.3sg    the   top-acc  
           'Feri reached the peak' (TELIC; particle is obligatory)
- c    Feri            (meg)            it-ta            a    (pohár) bort  
           Feri-nom    particle    drink-past.3sg    the   glass    wine-acc  
           'Feri drank the (glass of) wine' (with particle: TELIC; without particle: ATELIC)
- d    A    medence    \*(ki)            ürül-t  
           the   pool-nom    particle    empty-past.3sg  
           'The pool emptied' (TELIC; particle is obligatory)

**Particles and telicity.** The telic reading in Hungarian is not the result of an implicature. Unlike the implicature with English predicates which denote multi-point scales, it cannot be canceled (cf. RH 2008). *For*-adverbs and a denial of (maximal) culmination is marked in Hungarian:

- (2)a    Feri            le            nyírta a    fűvet,    #( de    nem    az    egészet)  
           Feri-nom    particle    cut    the   grass-acc    but   not   the   whole-acc  
           'Feri mowed the lawn, (but not all of it)'
- b    A    nap            #( két    óráig)    meg            szárította    a    pólót  
           the   sun-nom    two   hour-until   particle    dried            the   shirt-acc  
           'The sun dried the shirt (for two hours)'

Generalizing a proposal in Piñón 2006, I argue that telicity is the result of a maximality presupposition introduced by the particle. Specifically, it follows from the presupposition that the event in question lacks a continuation in the actual world and in alternative worlds. Considering perfective and imperfective forms in Hungarian, I also argue that particles are indeed the source of telicity (contra Slavic languages, where the perfective verb encodes telicity (Filip 2008)).

**(A)telic degree achievements (DAs).** In English, DAs, derived from a scalar adjective, show variation in the availability of telic readings (Abusch 1986, Hay et al. 1999, Kearns 2006, K&L 2008, a.o.). If the associated scale has a maximal value (it is upper closed), then the DA can be either telic or atelic. If the scale is open, the DA is atelic (3). Given the discussion above, it is expected that Hungarian DAs behave otherwise. While the associated scales are uniformly closed (3a,4a) or open (3b,4b) for both languages, it is particles which yield telicity for Hungarian DAs. In absence of a particle, the DA is always atelic; a telic interpretation is only available if particles



are present (4a,b). Telic interpretation is available with closed and open scale DAs alike.

- (3)a The shirt *dried* in half an hour / for half an hour (TELIC / ATELIC)  
 b The gap between the boats *widened* for ten minutes / ?? in ten minutes (ATELIC / ??TELIC)
- (4)a A póló két óra alatt \*(meg) *száradt*  
 the shirt-nom two hour under particle dried  
 'The shirt dried in two hours' (TELIC with particle, ATELIC otherwise)  
 b Az utat két hónap alatt \*(ki) *szélesítették* a munkások  
 the road-acc two month under particle widened-caus the workers-nom  
 '?? The workers widened the road in two months' (TELIC with particle, ATELIC otherwise)

(4) shows that closed scales are neither sufficient nor necessary to guarantee telicity of DAs.

**Open and closed scales.** Open and closed scale DAs still behave differently. A telic open scale DA requires only minimal change (5a), while the maximal value must be reached if the scale is closed (5b). Note that K&L 2008 argue that minimal change characterizes atelic readings, but (5a) is telic. *Meg* particles also identify closed scales; they appear with closed scale DAs only.

- (5)a Az út ki *szélesedett*, de még mindig elég keskeny  
 the road-nom particle widened but yet always enough narrow  
 'The road widened, but it's still too narrow' (TELIC, OPEN SCALE DA)  
 b #A mangó meg *érett*, de még mindig elég zöld / éretlen  
 the mango-nom **meg** ripened but yet always enough green / unripe  
 '#The mango ripened, but it's still too green / unripe' (TELIC, CLOSED SCALE DA)

**Same verb, different scales.** Some closed scale DAs can appear with more than one type of particle. The interpretation is always telic, but the event is mapped to different scales; the ambiguous event mapping is lexicalized by particles. With *meg*, the scale is the adjectival scale (6a). If the particle is not *meg*, then a non-scalar argument supplies the scale (6b). In (6b), the event is mapped to the spatial extent or volume of the argument undergoing the change of state.

- (6)a A szivacs félig meg<sub>AdjectivalScale</sub> *száradt*  
 the sponge-nom half **meg** dried  
 'The entire sponge is half dry' (is halfway to being completely dry) (TELIC)  
 b A szivacs félig ki<sub>SpatialScale</sub> *száradt*  
 the sponge-nom half particle dried  
 'Half of the sponge is (completely) dry' (TELIC)

(7) provides further support for the different scales involved. The puddle can be a quantity of water. Thus the puddle itself cannot become dry, but it can determine the quantity of water which evaporates. In other words, the event can only be mapped to the extent of *the puddle* (cf. (6b)).

- (7) A pocsolya \*meg<sub>AdjectivalScale</sub> / ki<sub>SpatialScale</sub> *száradt*  
 the puddle-nom **meg** / particle dried  
 'The puddle dried (out)' (TELIC)

**Contribution of particles.** I propose that all particles introduce the maximality presupposition noted above (i). With DAs, the particle *meg* can add two additional presuppositions: (ii) that there is a homomorphic mapping between the event and a scale argument of the verb, and (iii) that the scale is closed. Other particles, including *ki* 'out' may also introduce presupposition (iii), but they introduce a mapping between the event and a non-scalar argument of the verb (ii'). Thus in addition to telicity, the mapping of the event is also determined by particles in Hungarian.

## The Count / Mass Distinction across Grammatical Categories

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Rothstein (1999, 2004) claims that the count / mass distinction, traditionally associated to nominal expressions, can easily be extended to the verbal and adjectival domains. In particular, she argues that all adjectives denote mass entities while all verbs participate in count structures. Pursuing this line of thought, she therefore assumes that the verb ‘to be’ performs a ‘packaging’ function which converts mass adjectives into count verbal predicates.

However, a careful analysis of data from European Portuguese will raise important objections to this proposal. Firstly, there are some verbal predications – those involving individual-level non-phase statives – that cannot be considered as count expressions, even if we use Rothstein’s own tests (cf. (1)-(2)):

- (1) \* A minha secretária foi quadrada três vezes.  
‘My desk was square three times’
- (2) \* Sempre que o João tem dois metros de altura, joga numa equipa de basquetebol.  
‘Whenever João is two meters tall, he plays in a basketball team’

Secondly, we can find some adjectives that, given an appropriate context, can be interpreted as count entities, even if the verb ‘be’ is completely absent from the structure in which they occur, as illustrated by the small clause in (3):

- (3) O João viu a Maria grávida duas vezes.  
‘João saw Maria pregnant twice’

In its most prominent reading, sentence (3) refers to two distinct pregnancies by Maria; since the verb ‘be’ is absent in this structure, it must be the adjective itself that, in some extent, contributes to the count nature behind this construction.

The main goal of this paper will be, then, to demonstrate that the count / mass distinction is cross-categorical in that it shows up not only in the domain of nominal expressions but also with adjectives and verbal predicates.

We will begin by discussing some of Rothstein’s (1999, 2004) main proposals, showing that they fail to explain a great number of relevant data. We will pay special attention to European Portuguese since, as we will try to demonstrate, this language gives us a

number of interesting clues that pose unexpected problems and point to new directions in the treatment of the count vs. mass distinction across the different categorical domains considered here.

In order to provide a satisfactory explanation for the problem at issue, we will take into account some important distinctions that arise inside the class of stative verbal predications; as we will demonstrate, the consideration of different subclasses of statives will be directly relevant for the mass / count opposition. In this respect, we will argue that individual-level non-phase states, unlike all other aspectual classes of situations, cannot be count, pertaining to the domain of mass entities.

On the other hand, we will scrutinize the behaviour of some adjectives concerning their ability to choose between *ser* ('be') and *estar* ('be'). We will explore the hypothesis that those adjectives that obligatorily combine with *estar* ('be'), such as *grávida* ('pregnant') or *contente* ('happy'), pertain to the count domain, while those selecting uniquely for *ser* ('be'), such as *português* ('portuguese') or *falso* ('false'), are placed in the mass domain. We will also discuss the status of the great majority of the Portuguese adjectives, which pose an interesting problem for this kind of analysis, since they unproblematically select both *ser* ('be') and *estar* ('be').

We will focus on the observation that, in European Portuguese, the mass or count status of a given construction depends, in a great extent, on the interplay of different linguistic expressions combining dynamically. We will try to determine the ways in which they interact in order to compositionally obtain the final reading of the whole sentences.

As an important conclusion of our analysis, we will support the idea that the count / mass distinction crosses all grammatical categories, namely nouns, verbs and adjectives (if we adapt some of Zwart's (2005) claims, this treatment can even be extended to prepositions). The mass or count nature of each grammatical item will impose outstanding limits upon their linguistic behaviour and their combinatorial choices and possibilities.

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**Perfective aspect and actuality entailments: A cross-linguistic approach**  
**H. Davis., M. Louie, L. Matthewson, I. Paul, T. Peterson and M. A. Reis-Silva**

**Overview.** According to Bhatt (1999) and Hacquard (2007), ability assertions in languages which overtly encode a perfective/imperfective distinction give rise to actuality entailments (AEs) in the perfective. This is illustrated for French in (1): the ability assertion in the perfective aspect entails that an event of the relevant type took place in the actual world, as revealed by the infelicity of the second clause.

- (1) Jane a pu soulever cette table, # mais elle ne l’a pas soulevée.

Jane *could-PFV* lift this table, # but she didn’t lift it.’ (French; Hacquard 2007:21)

In this paper we show that Bhatt/Hacquard’s generalisation is not universally valid; in St’át’imcets (Salish), Gitksan (Tsimshianic) and Mundurukú (Tupí), ability statements in the perfective lack AEs. In contrast we show that both Blackfoot (Algonquian) and Malagasy (Austronesian) *do* have AEs in the perfective. We suggest that the cross-linguistic difference is signaled by an explicit cue: only languages with overt perfective morphology have actuality entailments, while languages with unmarked perfectives lack actuality entailments. We propose that the lack of AEs can be accounted for if the unmarked perfectivity in these languages is analysed as being lexically encoded in the main predicate, as opposed to being encoded by a zero perfective morpheme.

**Hacquard’s analysis.** Hacquard (2007) derives AEs via two main assumptions: (i) perfective aspect takes three arguments: a world, a predicate of events, and a time; (ii) the aspect merges low in the event argument slot, but must raise to a position directly below Tense in order to combine with a time. In its raised position, the perfective aspect’s world argument cannot be bound by a structurally inferior ability modal and must be bound by the default binder – i.e., the actual world. This entails that the event under consideration occurred in the actual world. While Hacquard only aims to account for French and Italian, the components of her analysis are not specific to these languages; the account predicts that all else being equal, a language with an (im)perfective contrast and a low ability modal should display AE effects.

**Some languages lack AEs.** Hacquard’s analysis makes the wrong predictions for at least three unrelated Amerindian languages: St’át’imcets, Gitksan and Mundurukú. Data are given in (2-4), which are all in the perfective aspect (indicated by the absence of obligatory overt imperfective marking). The ability assertions in these languages have an *implicature* of actuality, but not an entailment; see Davis et al. (2008) for the St’át’imcets findings, and Peterson (in prep.) for the Gitksan.

- (2) *ka*-cát-s=kan-*a* ti=tiípvl=a, t’u7 áy=t’u7 kw=en cat-s  
*CIRC*-lift-CAUS=1SG.SUBJ-*CIRC* DET=table=EXIS but NEG=just DET=1SG.POSS lift-CAUS  
 ‘I was able to lift the table, but I didn’t lift it.’ (St’át’imcets)
- (3) *da’akhlxw-y’* dim hahla’asd-y’ kyo’ots, ii ap neets  
*CIRC*-1SG FUT work-1SG yesterday CONJ CONFIRM NEG  
 ‘I could have/was able to work yesterday, but I didn’t.’ (Gitksan)
- (4) w-e-orok *put* o-je-ku kapusu imēnpit o-ce-orok ḡu  
 1sg.s-POSS-hunt *CIRC* ojeku yesterday then 1sg.s-COREF.POSS-hunt NEG  
 ‘I was able to hunt yesterday, but I didn’t hunt.’ (Mundurukú)

On the other hand, Blackfoot possesses AEs, as shown by the contradictory status of (5); the same is true of Malagasy (Phillips 2000).

- (5) ana Joel *ihkott*-sspinni-m-wa omi iitáisooyo’p # ki máát-sspinni-m-waatsiks  
 DEM Joel *CIRC.PFV*-lift.VTI-3>IN-3 DEM table CONJ NEG-lift.VTI-3>IN-3:NAFF.SG  
 ‘Joel was able to lift that table ... but he didn’t lift it.’

**Generalisation.** We suggest that the presence or absence of an actuality entailment in the relevant circumstances is signaled by an overt clue: only languages with overt perfective morphology yield AEs, while languages with unmarked perfectives lack AEs. Note that in French there is overt material signaling the perfective aspect (the *passé composé* in (1)). The same is true in Malagasy, and is at least plausibly the case in Blackfoot: the absence of the imperfective gives rise to a perfective reading, which, in the context of the ability modal, is always morphologically signaled by a vowel change in initial position. On

the other hand, the non-AE languages we have investigated all contrast an overt imperfective marker with a null, or default perfective.

**Proposal.** We propose that the lack of an AE can be derived if the default perfectivity associated with unmarked predicates in St'át'imcets, Gitksan and Mundurukú is lexically encoded in the main predicate - this is illustrated below for St'át'imcets "lift." The predicate takes an individual, an event and a time, asserting that the runtime of the event is contained within that time variable:

(6)  $\| \text{cát} \|^{w} = \lambda x. \lambda e. \lambda t. \tau(e) \subseteq t \ \& \ \text{LIFT}(x)(e) \ \& \ e \text{ is in } w$

Recall that Hacquard's analysis relies on a type-mismatch that forces perfectivity (and its world argument) to raise above the ability modal, where it can combine with a time argument. Its world argument can then only be bound by the default binder - the actual world - resulting in an assertion that an event took place in the actual world. If perfectivity in St'át'imcets, Gitksan and Mundurukú is lexically encoded on the predicate as schematized above, however, no type-mismatch arises - after the individual and event variable are satisfied, Tense merges in to provide a time argument for the predicate. Perfectivity (and its world argument) need not move, and the world variable can be bound in-situ by a structurally superior ability modal. The statement thus only asserts that an event takes place in a world compatible with the subject's abilities, and not necessarily the actual world. Note that our analysis requires that imperfectivity in these languages override perfectivity, as opposed to merely asserting imperfectivity; we propose a modal analysis along the lines of Portner's English progressive (1998), where only a non-final sub-event, not an entire event, is asserted to take place in the actual world.

**Evidence.** The analysis proposed above stands in contrast with an analysis where the null or default perfectivity associated with bare predicates in St'át'imcets, Gitksan and Mundurukú is encoded via a zero-morpheme structurally analogous to the overt perfective. The behaviour of clitics in St'át'imcets and Gitksan provide evidence against such an analysis, however. Because imperfective markers in these languages can support subject clitics, one would predict that a zero-perfective would be able to do the same. In Gitksan, however, the predicted clitic-initial utterances are ungrammatical, while clitic-initial utterances in St'át'imcets are necessarily interpreted as imperfective (Davis 1999). These data suggest that a meaningful absence in language does not always correspond to a zero-morpheme.

**Further questions: the imperfective.** Even more complexity is added to the cross-linguistic picture when we broaden the domain to include *imperfective* ability assertions. We have already seen that St'át'imcets, Gitksan and Mundurukú falsify the perfective half of Hacquard's original predictions, by lacking AEs. Perhaps even more strikingly, Blackfoot and Malagasy falsify the imperfective half of Hacquard's predictions: their imperfectives *have* AEs. Thus, the imperfective counterpart of (5) in Blackfoot is still contradictory. At this stage we can only speculate on a solution to this problem, but suggest that the imperfective AEs, in Blackfoot at least, derive from the fact that the Blackfoot imperfective, unlike the French imperfective, requires verifying instances.

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## Avatime: a tenseless language? A question of semantics versus pragmatics

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Avatime, also called Siya or Sideme, is one of the Ghana Togo Mountain languages, within the Kwa subgroup of the Niger-Congo language family. It is spoken by approximately 12 000 people living in eight villages in the Volta region of Ghana. There have been some descriptive studies over the last hundred years (Funke, 1909, 1910; Ford, 1971a,b; Schuh, 1995a,b; Maddieson, 1998; Adjei, 2007) but it remains largely under-described.

The tense, aspect and mood (TAM) system of Avatime was briefly described by Funke in his 1909 grammar and also by Ford in his 1971 thesis. They both described the system as tense prominent, with immediate and non-immediate future forms. Tense is not common in Kwa languages, which are generally strongly aspect prominent with little to no use of grammatical tense (Ameka & Kropp Dakubu, 2008). Ghana Togo Mountain languages, however, may be an exception to this tendency and have often been described with a primary future vs. non-future tense distinction (Dorvlo, 2008; Harley, 2008; Höftmann, 1971).

In this presentation I will argue for reanalysing Avatime as a tenseless language, thus bringing it closer to the general Kwa pattern. In particular I will show why the forms *tá-* and *â-*, previously described by Funke (1909) and Ford (1971a) as immediate and non-immediate futures, are better treated as moods with a potential semantics. Since the future is generally uncertain and the past is generally filled with known events, sentences containing these forms are often used to refer to future events, and in the absence of context they will, almost without exception, be interpreted as referring to events in the future. However, there are too many examples where these forms are used to refer to potentially occurring events in the past and present for the future time reference to be a part of their semantics. Hence I conclude that this default future interpretation is a pragmatic inference from world knowledge.

The difference between pragmatic interpretation and semantic meaning is often subtle and can easily be missed, especially in cases where the pragmatic situation is unvaried such as during elicitation sessions. It can, however, have a very large impact on the analysis of TAM systems. This difference, thus, poses a potential problem for the study of TAM systems, particularly those of under-described languages for which we may be lacking the necessary information to decide whether a meaning is inherent to the semantics of the form or pragmatically derived. Hence, while under-described languages provide a rich source of information regarding the cross-linguistic possibilities of TAM marking and semantics, it is important to remember that their TAM systems, possibly more so than those of other languages, are open to revision.

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## Categories of the verb in the Pilbara languages of Western Australia

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Despite being closely related, the twenty or so indigenous Australian languages of the Pilbara region of Western Australia show a degree of interesting variation in their morphosyntactic patterning — parameters include case marking alignment, dependent clause structures, presence/absence of active/passive voice alternations, degrees of importance of bound pronoun agreement systems. This variation can best be understood through an exploration of syntactic change in the region and many of the keys to unlocking that history lie in comparative analysis of the verbal inflectional system — since the status of clauses (as finite or non-finite, dependent or independent, active or passive) is in large part coded by the choice of inflection.

Verb inflections encode a range of meanings within the domains of tense, aspect, and modality; as well as syntactic functions including voice, hypotactic status and switch-reference. Of course, it is not the inflectional system alone that contributes meanings in these domains. The larger picture involves interaction between the inflectional categories of the verb, the lexical semantics of verb stems (basic and derived forms), temporal adverbial phrases and clauses, clitic and particle elements coding temporal, modal and evidential meanings, and the clausal, sentential and wider discourse frames in which particular inflected verbs may occur. It is abundantly clear that detailed analysis of this morphosyntactic system must depend on detailed semantic analysis at the lexical, clausal and discourse levels.

This paper seeks to provide no more than a glimpse of the rich semantic tapestry presented in the verbal system of these languages while arguing that an integrated and sophisticated comparative approach will not only serve to illuminate the semantics of the verbal system in each particular language, but is the only way to make progress towards an understanding of the historical dimension. After first introducing the broad diachronic issues to be addressed, a summary of the problems encountered and to be solved in attempting a comparative analysis of the verbal systems is presented. These problems include:

1. The languages have between two and five verb conjugation classes — traditionally understood to be arbitrary remnants of phonological change, but which appear to have (developed) a semantic basis.
2. Grammatical descriptions of the languages employ a wide variety of labels for different verbal inflectional categories.
3. Languages are described as distinguishing between seven and eighteen distinct TAM categories in the inflectional paradigm
4. While languages may share a identical or overlapping particular TAM categories apparent, the forms marking these categories may not be cognate.
5. Where languages may share inflectional forms, it is not always clear how or even if the categories coded by these forms coincide or overlap in meaning,
6. Categories are expressed using the resources of a range of morpho-syntactic sub-systems of the grammar — an equivalent category may be coded in quite different ways in two languages.



The issues are illustrated in more detail with examples taken from two languages in particular — Martuthunira and Nyamal. An argument is made for the development of a detailed typologically based grid of semantic categories, designed specifically for these languages, and which will allow further synchronic and diachronic investigation.

## Le conditionnel français en diachronie : une exploration textuelle et co(n)textuelle

Depuis les années 1990, le conditionnel français a fait l'objet d'un intérêt marqué. Peu étudié auparavant contrairement aux autres « temps » de l'indicatif, il a donné lieu à la publication de nombreux travaux : deux thèses (Haillet 1992 et Abouda 1997), un ouvrage collectif (Dendale et Tasmowski 2001), une monographie (Haillet 2002) et toute une série d'articles (*e.g.* Donaire 1998, Schrott 1998, Dendale 1999, Gosselin 1999, D'Hulst 2002, Kronning 2002, Haillet 2003, Soutet 2007, Bres 2009). Dans ces travaux, le conditionnel a pourtant rarement été étudié en diachronie (Squartini 1999, D'Hulst 2002, Bourova et Dendale 2006).

Nous proposons de poursuivre dans une perspective diachronique l'exploration de la valeur et des usages du conditionnel, grâce à une analyse de corpus rendant compte de ses particularités textuelles (génériques, énonciatives) et co(n)textuelles (syntaxiques).

Notre étude se fonde sur l'exploration d'un corpus extrait de la base FRANTEXT : 3911 textes s'échelonnant de 1180 à 1999 et illustrant des genres variés (correspondance, éloquence, mémoires, pamphlet, poésie, récit de voyage, roman, théâtre, traité, essai), où ont été recensées toutes les formes en *–rait* (variantes graphiques incluses).

Dans un premier temps, nous caractérisons le co(n)texte syntaxique et énonciatif dans lesquels ces conditionnels surviennent, de manière à évaluer la répartition et la fréquence de leurs emplois temporels ou modaux. Nous soumettons ainsi nos occurrences à une tentative de classement selon les emplois *canoniques* répertoriés (cf. la typologie donnée par Dendale 2001) : (i) futur du passé, (ii) conditionnel d'emprunt, (iii) conditionnel d'atténuation ou (iv) conditionnel d'éventualité — et leurs différents sous-emplois (discours indirect, historique, journalistique, polémique hypothétique etc.). La quadripartition des emplois canoniques proposée par Dendale se trouve dès lors questionnée à la lumière de la répartition et de l'évolution des usages du conditionnel.

Outre la question de leur répartition, notre étude permet en effet, dans un second temps, d'esquisser une évolution des emplois du conditionnel, avec des tours qui apparaissent, comme c'est le cas du conditionnel historique (sous-emploi de futur du passé), au vingtième siècle :

(1) Quand Adam s'allongea innocemment sur le côté pour se faire extraire sous anesthésie divine une côtelette qui **deviendrait** la femme, songea-t-il en revenant à lui qu'il venait de prêter le flanc à la critique. (Blondin, *Un malin plaisir* ; 1991)

qui disparaissent, ou qui restent stables tout au long de la période étudiée, à l'image du conditionnel en discours indirect :

(2) Madame De Ventadour a dit à monsieur qu' elle **suivroit** madame comme le roi lui avoit ordonné. (Dangeau, *Journal* ; 1700)

Nous nous proposons ainsi de périodiser les grandes tendances d'emplois du conditionnel, et ce en rendant compte des spécificités liées à leur répartition par genre textuel.

Enfin, à la lumière de cette approche diachronique et textuelle, notre contribution permet d'offrir un éclairage historique sur quelques-uns des principaux débats sémantiques qui animent aujourd'hui les linguistes synchroniciens : outre la typologie des emplois du

conditionnel dont il vient d'être question, on aborde la question de l'*invariant sémantique*, du conditionnel : a-t-il en langue une valeur aspectuo-temporelle comme une majorité d'auteurs tend à le croire (e.g. Gosselin 1999, Vuillaume 2001, Bres 2009), ou bien aurait-il un sens modal impliquant la présence sous-jacente d'une conditionnelle dans tous ses emplois (e.g. Korzen et Nølke 2001, Moeschler et Reboul 2001) ? En interrogeant ces deux perspectives, nous esquissons notamment quelques pistes pour rendre compte de la tendance, repérable en français contemporain, à assimiler futur et conditionnel (Barcelò 2007 : 52, Patard et Richard, à paraître) :

(3) Vaste programme.... Je **viendrais** te voir pour voir l'évolution de ce plaid à venir... Charmante petite grille. Bien sûr, broder ne nous apporte que du bonheur... Bonne soirée. (extrait du blog *Atelier des passions*)

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## Modal meanings of the English (present) progressive

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The semantics of the English progressive has attracted a lot of scholarly attention over the past decades (see, for instance, Scheffer 1975 and Dahl (ed.) 2000). Almost invariably, however, descriptions of the various (contemporary) uses of the English progressive encounter difficulties in establishing the basic meaning of this grammatical construction, if they attempt to do so at all. That is, most studies do not in fact consider the possibility of coming up with a truly integrated analysis, which holds for *all* usage types and thus derives concrete instances of use from a common and constant (semantic) core. Moreover, there appears to be an almost exclusive focus in the extant literature on the progressive's temporal uses (mostly involving duration or temporariness), to the detriment of uses in nontemporal (i.e., modal) domains, which are not entirely infrequent. The present corpus-based investigation seeks to fill this gap and offers an account that does include such modal uses of the progressive, while at the same time proposing a fundamental epistemic meaning as the unifying schema on the basis of which other usage types, modal as well as nonmodal, may be straightforwardly explained.

In our analysis, we will concentrate on the classification of modal uses of the present progressive, as attested in the Santa Barbara Corpus of Spoken American English (Du Bois et al. 2000). The analysis is based on Cognitive Grammar's theory of grounding (Langacker 1991), which defines "grounding predications", including tense markers, in terms of epistemic modality at the most schematic level of characterization. Within this theory, Brisard (2002) and Langacker (forthcoming) argue for a schematic definition of the simple present – the counterpart of the progressive in the English present-tense paradigm – as indicating *epistemic necessity* (absolute certainty) in the speaker's model of "immediate reality". The progressive is considered to express *epistemic contingency*, again within the speaker's immediate reality.

Given the explicitly modal starting point for this analysis, we wish to demonstrate the possibility of relating a number of specific modal usage types to the purported core meaning of the progressive, each of them instantiating the semantic schema in a slightly different way. Elaborations of the schema are shown to follow general cognitive principles of meaning extension, mobilizing aspects of attention (scope), perspective, and prominence. These are all concepts for which Cognitive Grammar provides useful descriptive tools. The usage types that can be distinguished in the resulting semantic map for the English progressive do not only differ in the particular domains they evoke (temporal vs modal), but also in the degree of specificity with which they attend to or ignore certain elements of the schema they instantiate.

The modal categories that are distinguished here all exploit, in one way or another, the epistemic notion of contingency that lies at the heart of the progressive's use in English (most of them also appearing in past-time contexts). Just like with the simple present, they involve a reference to the knowledge state of the speaker, who construes the designated situation as actual (currently real, even if only "subjectively"), but in addition these uses of the present progressive, compared to its simple counterpart, seem to qualify this reality, making it epistemically marked. Thus, a significant number of modal uses in the corpus specifically focuses on the given situation's unconsolidated status, i.e., the fact that it could not have been predicted or in any way expected at the time of speaking. This may, but need not, give rise to connotations of surprise (1), atypicality/unexpectedness (2), and irritation/indignation (3):

(1) ... <HI What is m- ... blowing out of there HI>.  
DORIS: Well, that's what happens with that air conditioner.

(2) .. Nothing's doing what it's supposed to anymore,

(3)MILES: ... (Hx) I mean, ... % what are they thinking.

Furthermore, the speaker, in using the progressive, generally has the choice to emphasize the actuality of the situation (since it occurs or is real despite what could be expected), as in (4), or to express some degree of tentativity (5), considering the situation's atypical status:

(4) (H) I always have somebody that really knows what they're doing,  
**For the horses that I'm really really using.**

(5) if this thing goes like they think it is,  
**next fall he's wanting to**, ... start looking at expanding that .. storage facility.

If a process is construed as nonstative and bounded in time, which it is with the progressive (cf. its so-called internal perspective, as the result of “zooming in” on a process), then this would indicate that it requires more energy to be maintained and exhibits a higher potential for change, unlike real states. Accordingly, the progressive may be used in situations where the suggestion of a greater amount of control involved in maintaining a given process is contextually relevant (6). And finally, stressing the intensity of a process, which is closely related to the notion of control, is yet another instance of exploiting the progressive's special connection with dynamic events in English. Usually, intensifying uses (7) prominently feature the personal involvement and active investment of the subject to keep such an event going:

(6) .. oh and it's a killer on your back, **cause you're standing like this.**

(7) ... I don't even know how you can do that.  
.. You're dancing with them,  
**<<SLAPPING they're beating you just like this HI>.**

All these usage types will be briefly characterized and placed in a network, indicating links with both the sanctioning schema and neighboring categories. For each usage type, our particular attention will go to establishing which element(s) of the semantic schema for the progressive it elaborates, and exactly which cognitive principles are involved.

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## Encore : Répétition et plus, si affinité

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*Encore* est un adverbe additif qui marque une relation de discours anaphorique de type présuppositionnel, dont la valeur est déterminée par le contexte linguistique et extralinguistique. Nous proposons de distinguer deux composantes de sens qui interagissent dans le calcul de la signification des phrases contenant *encore* : d’une part le sens de base de l’adverbe, qui est celui d’un opérateur de répétition qui définit une relation anaphorique sur un domaine ordonné, et d’autre part sa sensibilité à la nature du domaine sur lequel la répétition est calculée, dont il résulte un éventail de lectures différentes déjà largement décrites dans la littérature et illustrées en (1).

- |     |  |                |
|-----|--|----------------|
| (1) | a. Jean est <b>encore</b> sous le choc.        | (CONTINUATIVE) |
|     | b. Jean a <b>encore</b> raté l’avion.          | (ITERATIVE)    |
|     | c. Jean a couru <b>encore</b> deux kilomètres. | (INCRÉMENTALE) |

Le schéma de base qui représente le noyau sémantique de l’adverbe, donné en figure 1, est composé de deux niveaux distincts qui encodent les deux composantes et qui correspondent à deux ordres d’information distingués.<sup>2</sup>

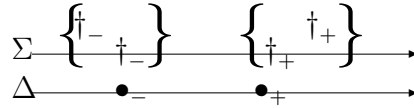


FIG. 1 – Le noyau sémantique de *encore*

**Domaine Δ : le sens lexical de l’adverbe** Le sens lexical de *encore* est représenté par une séquence de deux éléments ordonnés (les deux ‘•’), qui appartiennent à un domaine Δ que l’on peut toujours rapporter à un ordre linéaire. L’élément *asserté* est marqué par le diacritique ‘+’ en indice. Le diacritique ‘-’ marque l’élément *présupposé*, qui est anaphorique par rapport à l’asserté.

**Domaine Σ : l’information contribué par le contexte** Dans le domaine Σ nous représentons l’information contribué par le contexte linguistique et extralinguistique, qui peut s’organiser en deux catégories :

- a – des contraintes *sémantiques* relatives a l’information lexicale et grammaticale provenant du prédicat de la phrase ;
- b – des inférences *pragmatiques* justifiées par la situation d’énonciation.

Le domaine Σ est aussi structurable en un ordre linéaire ; nous pouvons supposer qu’il s’agit d’un ordre temporel ou événementiel, quand le schéma s’applique sur des évenances comme en (1a,b) ; ou d’un ordre constitué par une échelle de degrés, quand il s’applique sur des entités impliquées dans une comparaison, comme en (1c,d).

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<sup>2</sup>Le schéma effectif ne contient qu’une seule borne  $\dagger_{+/-}$ . Elle apparaît deux fois entourée d’accolades dans la fig. 1 pour représenter ses deux ordonnements possibles par rapport au point ‘•<sub>+/-</sub>’. Les accolades constituent une solution graphique pour signaler que les deux positionnement sont en alternative.

Nous distinguons deux éléments en  $\Sigma$ , représentés par  $\dagger_-$  et  $\dagger_+$ , qui déterminent l'intervalle à l'intérieur duquel les deux éléments de  $\Delta$  trouvent leur définition. ' $\dagger_{-/+}$ ' sont deux bornes qui ne sont pas nécessairement réalisées. La nature des ' $\dagger$ ' et leur position par rapport aux ' $\bullet$ ' sont la source de différences d'interprétation de la phrase.

La nature continue ou discrete du domaine  $\Sigma$  permet de définir deux schémas fondamentaux, itératif et continuatif, sur lesquels on decline les autres interprétations de *encore*.

Quand  $\Sigma$  représente un *ordre temporel*, les lectures différentes de (1a) et (1b) sont dues aux différences d'aspect lexical des prédicats contenus dans les phrases.

Premièrement, dans le cas d'un prédicat télélique, cf. (1b), la représentation de l'évenance  $e$  est réduite à sa borne de ténacité et correspond au  $\bullet_+$  de la figure 2. Ceci entraîne la lecture ITÉRATIVE de *encore*, où domaine  $\Sigma$  est une séquence d'événements. C'est au moins la deuxième fois que Jean a raté l'avion ( $\dagger_-$ ,  $\dagger_+$ ), mais il l'avait peut-être déjà raté avant ( $\hat{\dagger}$ ) et il le ratera peut-être à nouveau ( $\hat{\dagger}$ ).

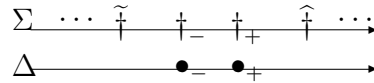


FIG. 2 – *Encore* itératif

Dans le cas d'un prédicat d'état ou d'activité (1b), l'évenance  $e$  est constituée par un prédicat ayant une structure homogène. L'asserté et le présupposé sont des instants qui se trouvent à l'intérieur de l'intervalle temporel qui définit l'évenance atélique dans  $\Sigma$  (Fig. 3). Les bornes  $\dagger$ , qui délimitent cet intervalle, ne sont pas nécessairement visibles, et correspondent à des changements d'état (du possible  $\neg P$  à  $P$  et de  $P$  au potentiel  $\neg P$ ). La structure homogène du prédicat est responsable de la lecture CONTINUATIVE, car tout instant qui appartient au segment sur  $\Delta$  en correspondance avec le segment homogène<sup>3</sup> de  $\Sigma$  appartient à la trace temporelle de la même évenance.

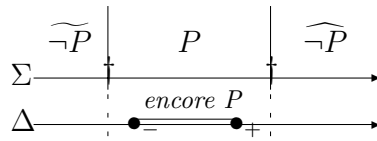


FIG. 3 – *Encore* continuatif

Pour modéliser la lecture incrémentale en (1c), on substitue au domaine du Temps celui des Degrés. Par exemple, à partir du schéma en Fig.2, on interprète  $\dagger_-$  comme la marque de la première mesure sur une dimension donnée relativement à une entité. Ensuite, l'intervalle compris entre les deux  $\bullet$  représente un ajout sur la même dimension et relativement à la même entité, ce qui nous donne la similarité avec la lecture de continuité. De plus, ceci permet de traiter l'incrémentalité comme étant dissociée de la localisation temporelle : la continuité est assurée au niveau de la mesure et non de la temporalité.

<sup>3</sup>Ce segment est mis en évidence par les deux verticales en pointillé issues des  $\dagger$  dans la Figure 3. Ces verticales n'appartiennent pas au schéma, elles constituent une solution graphique de l'ordre d'une méta-représentation. De plus, le premier  $\dagger$  peut occuper deux positions, comme indiqué dans la figure 1.

# -ung nominalizations of verbs of saying in German, Events and Propositions

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## Abstract

-ung nominalizations of verbs of saying in German can be interpreted as events or propositions. There are context partners of such nominals which disambiguate the reading or suggest preferences. We consider a specific ambiguous constellation which is very frequent in German, where the nominal is the internal argument of a PP with *nach*. We detail the semantic representations of corresponding sentence types in the framework of Discourse Representation Theory and conclude from this an explanation of why some context partners suggest the one reading and some the other. The findings are currently used in corpus analyses to test the relevance and coverage of the stipulated criteria and to optimize preference weights statistically. We present some of the results.<sup>1</sup>

Typically, -ung nominalizations are ambiguous. They may describe an event (*nach der Begradigung<sub>e</sub> des Rheins bei Mannheim* / *after the straightening of the Rhine near Mannheim*) a state (*während der Teilung<sub>s</sub> Deutschlands* / *during the partition of Germany*) or an object (*die Übersetzung<sub>o</sub> des Romans verkauft sich gut* / *The translation of the novel sells well*). -ung nominals are not always three-way ambiguous. According to the underlying verb, there are three, two or only one reading. Of course, context disambiguates further. Hypotheses about ambiguity of -ung-nominals and about disambiguating contextual constraints can be found in [Ehrich and Rapp (2000), Roßdeutscher (2007), Spranger and Heid (2007), Eberle et al.(2008)].

-ung nominalizations of verbs of saying are particularly interesting because they relate to speech acts or, more generally, to statements, and to attitudes and reports about statements. For a number of computational applications it is important to know which of the different readings is present in a sentence and which context partners can disambiguate them (e.g. for Machine Translation, Text Mining etc.). Consider the following example taken from the *DeWaC-Korpus* [Baroni and Kilgarriff (2006)].

- (1) a) *Die 1. Wiederholungsprüfung muß nach Mitteilung des Prüfungsergebnisses zum nächsten regulären Prüfungstermin abgelegt werden.*  
*The first retake of the examination must be passed by the next regular date of examination after announcement of the results of examination.*  
b) *Die 1. Wiederholungsprüfung muß nach Mitteilung des Prüfungsausschusses zum nächsten regulären Prüfungstermin abgelegt werden.*  
*According to the announcement of the examination board, the first retake of the examination must be passed by the next regular date of examination.*

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In (1.a), *Mitteilung/announcement* is obviously interpreted as an event: The first retake of the exam must occur **after** the event of announcing the results of the (first) examination. In contrast, in (1.b), it is interpreted as a proposition: the examination board states that retakes must be passed by a specific date. Note that this reading also incorporates an announcement which is an event, but it plays another role: It is presupposed as the cause of the announcement as a propositional result. Its time is independent of the times of the retakes that the announcement as a proposition - the regulation - speaks about. Clearly, in (1.b), the definite description does not refer to this event but to the proposition, whereas in (1.a) it is the other way around. What is the reason for this difference? Obviously, the different genitive complements play an important role. In (1.a) the complement introduces an agent and in (1.b) a theme. However, in many cases this difference has no relevant disambiguating effect. In cases like (1) it is rather the influence of the preposition *nach*, which itself is ambiguous between a temporal reading (*after*) and a reading as *discourse relation* (*according to*), and the different constraints these readings impose on the argument of the corresponding PP and on the VP that this PP modifies.

In the presentation we specify the *temporal interpretation* and the *propositional interpretation* of such PPs with *nach* in the framework of *Discourse Representation Theory* (DRT; cf. [Kamp and Reyle (1993)]). We use suggestions from [Kamp (2002)] and [Eberle (2004)] for representing presuppositions and attitudinal states, to work out the differences of the two types of interpretation in detail, in particular with regard to information structure. From these differences we deduce a number of (pragmatic) constraints and define contextual criteria that make one interpretation or the other possible or impossible, likely or unlikely: In an earlier study we concentrated on contextual clues which fully disambiguate the readings of the nominalizations via selectional restrictions (e.g. adjectives and participles applying to events only - *nach erfolgter Meldung<sub>e</sub>/the announcement being carried out* - or to propositions - *nach einer zweifelhaften Meldung/according to a doubtful announcement*; cf. [Eberle et al.(2008)]). Here, we focus on criteria which only suggest preferences, such as the availability of an *agent* as in (1.a) or of a *theme* as in (1.b). We discuss a number of such criteria and show how our semantic analysis system - which is an adaptation of the Lingenio research prototype for underspecified syntactic and semantic analysis (cf. [Lingenio (2009)]) - can be used to adjust the weights assigned to the criteria in order to approximate the disambiguation decisions of a human recipient of the sentences.

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## Temporal Structure of Noun Clauses in Turkish

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The subordinating noun clause suffixes in Turkish fall into two groups in terms of the structural and semantic features they possess: *-Dİk*, *-(y)İş* and *-EcEk* are not allowed with control verbs (e.g. want to, try to, promise to) and they can always have an overt subject. *-mEk* and *-mE*, on the other hand, are allowed to be used with control verbs as illustrated in (1) and (2):

1. Murat [<sub>NC</sub> *pro* İstanbula *git-tiğ-in-e/ gid-eceğ-in-e/ gidişine*] sevindi.  
(Murat was glad that he had *gone* to / would *go* to / his *going* to İstanbul.)
2. Murat<sub>i</sub> [<sub>NC</sub> PRO<sub>i</sub> İstanbula *git-mek/git-me-y-i*] istedi.  
( Murat wanted to *go* to İstanbul.)

In terms of their structural behaviour, we can say that the noun clauses produced by *-Dİk* and *-EcEk* correspond to ‘that clauses’ in English; while those that are obtained by *-mEk* and *-mE* are similar to English infinitival clauses or gerunds.

The semantic difference among these morphemes is that *-Dİk* and *-EcEk* describe facts while *-mEk* and *-mE* describe acts (Lees, 1966; Sezer, 1991; Kornfilt, 1997; Turan, 2003). A factive proposition can be questioned in terms of its truth value. However, a proposition that describe an act does not have a truth value hence can not be questioned. In (3), one can not question whether the door was closed or not; however, it is possible for (4):

3. Murat [<sub>NC</sub> kapıyı *kapat-ma-m-ı*] istedi.  
(Murat asked me *to close* the door)
4. Murat [<sub>NC</sub> kapıyı *kapat-tığ-ın-ı*] söyledi.  
( Murat told that he *closed* the door).

The claim of this study is that these morphemes differ from each other in terms of the aspectual- temporal structure they reflect. *-mEk* is simply infinitive and has no aspectual value. *-mE* always refers to a process of some action interpreted free from the aspectual properties of the verb in the matrix clause. The NC presented in (5) gets a unique interpretation ‘the process of leaving’ regardless to the tense/ aspectual properties of the predicate of matrix clause.

5. Murat [geminin limandan *ayrıl-ma-sı-n-ı*] izledi / izliyor/ izleyecek.  
( Murat watched/ is watching/ will watch/ the departure of the ship from the port/the ship *leaving* the port)

On the other hand, the aspectual interpretation of *-Dİk* is relative to the matrix clause and the lexical aspect of the verb it is attached to. It is a widely accepted claim that *-Dİk* refers to a completed action hence has a perfective structure (Underhill, 1972; Yavaş, 1980; Göksel and Kerslake, 2005). However, this morpheme is sensitive to the lexical aspect of the verb it is attached to and may take either a perfective or an imperfective interpretation depending on the aspectual class of its verb. If the verb is stative, in Smith’s term (1992), then *-Dİk* refers to a state and gets an imperfective interpretation regardless to the matrix clause as illustrated in (6):

(6). Murat [Fatmanın kendisini *anla-dığ-ın-ı/ tanıdığını/ beğendiğini/ özlediğini* söyle-di/ söylü-yor.

(Murat is saying/ has said that Fatma *understands/ knows/ likes/ misses* him).

When there is an action or an achievement verb in the NC, then the aspectual interpretation of –DIk becomes relative to the matrix clause. ‘yap’ (do) in (7a-b) is an action verb. Hence, ‘ne yaptığını’ refers to a perfective/ realized event in the past in (7a) since the matrix clause is in past tense and its grammatical aspect is perfective. However, it gets an imperfective interpretation when the verb in matrix clause has imperfective aspect:

(7) a. Murat bize [ne *yap-tığ-ın-ı*] anlat-ma-dı.

(Murat did not tell us what he had *done*)

b. Murat bize [ne *yap-tığ-ın-ı*] anlat-ma-z.

(Murat does not tell us what he *does*).

Similar to –DIk, -(y)İş also undergoes the scope of the matrix clause and gets two different interpretations. However, it is not affected by the lexical aspect of the verb it’s attached to. When the matrix clause is perfective, it refers to a completed action, hence gets a perfective interpretation as in (8a) and (8b):

8 a. Murat [geminin limandan *ayrıl-ış-ın-ı*] izle-di.

(Murat watched the ship *leave* the port)

b. Murat [geminin limandan *ayrıl-ış-ın-ı*] izli-yor.

(Murat is watching the ship *leaving* the port)

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## Epistemic modality and dependent indefinites

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BACKGROUND: This paper addresses the properties of the Romanian existential indefinite determiner *vreun*, often mentioned in the literature of dependent items (Giannakidou 1997, Alonso-Ovalle & Menendez-Benito (henceforth A&M) 2009), but not entirely understood. The discussion builds on observations in Farkas (2002) and Falaus (2008), brings out previously overlooked contrasts and puts forth new generalizations capturing the distribution of *vreun*. More generally, it adds to the growing class of dependent items sensitive to epistemic modality, and thus puts together *vreun* with other existential determiners in Romance (e.g. French *quelque* and Spanish *algún*). Finally, I consider how this pattern can be integrated in a more general theory of polarity-sensitive items, developed in Chierchia (2008).

THE CHALLENGE: *Vreun* occurs in two kinds of contexts: (a) typical negative polarity contexts, such as negative contexts, antecedent of conditionals, questions, with a meaning and distribution roughly equivalent to English *any* (as argued for in Falaus (2008)) and (b) non-polarity, positive contexts, discussed in detail in Farkas (2002), with a meaning equivalent to *some*. I present new data and argue that the distribution of *vreun* in non-polarity contexts (i.e. under modals, hypotheticals and attitude verbs, disjunctions) is governed by **epistemic modality**. The contrast between the deontic reading (1) and the epistemic reading (2) of the necessity modal *must* illustrates this requirement:

- (1) \**Trebuie* să scriu **vreun** articol despre ultimele alegeri.

‘I *must* write **some** paper about the last elections.’

- (2) Cu numele lui, *trebuie* să fie **vreun** aristocrat.

‘Given his name, he *must* be **some** aristocrat.’

Similarly, I show *vreun* occurs in presumptive contexts, an irrealis mood (morphologically based either on future or conditional forms), conveying the meaning that there is indirect evidence (either hearsay/reported or inferential) that a certain state of affairs might hold/might have held. Adopting Irimia’s (2008) analysis of presumptive forms as epistemic modals and following the hypothesis I defend here, the systematic licensing of *vreun* by presumptive morphology is expected:

- (3) a. \*A \_\_\_\_\_ trecut **vreun** urs pe aici.      b. O \_\_\_\_\_ *fi* trecut **vreun** urs pe aici.

HAVE.3G passed V-A bear PREP here      FUT2.3SG BE passed V-A bear PREP here

‘Some bear might have passed by.’

Further empirical support for the hypothesis that epistemic modality is the crucial factor comes from the fact that both disjunctions and presumptive forms (both arguably epistemic modal contexts, cf. Zimmermann 2000) rescue *vreun* in otherwise non-licensing contexts, like *want*, as illustrated by the contrast in (4):

- (4) a. \**Vreau* să cumpar **vreu** carte despre Picasso.

want.1sg SUBJ buy V-A book about Picasso.

- b. *Vreau* să cumpar o/**vreu** carte sau **vreun** album despre Picasso.

‘I want to buy a/**some** book or **some** album about Picasso.’

Furthermore, I discuss the licensing of *vreun* in the scope of attitude verbs like *believe*, *assume*, *hope*, and in certain cases of imperatives (*alternative-presenting* in Aloni’s 2007 terminology), which supports the claim that the relevant factor is the type of entailment authorized by the embedding operator. Crucially, the embedding operator, be it an overt modal or an attitude verb, must not rule out the possibility that *not p* might hold in some of the speaker’s doxastic alternatives (*p* the proposition where *vreun* occurs). This is the common feature of all licensing contexts, which I subsume under the label of epistemic modality: **the crucial licensing factor is the existence of a set of alternatives entertained by the speaker which include non *p*-worlds.**

I address the challenges raised by the puzzling distribution of *vreun*, which differs from all other dependent items mentioned in the literature (‘modal’ indefinites like *quelque*,

*algun* or free-choice existentials). First, I argue against Farkas (2006) who defends an ambiguity approach, claiming there are two different *vreun* items, and show it makes wrong empirical predications. Moreover, I show that Giannakidou's unifying analysis of *vreun* in terms of nonveridicality is also not entirely appropriate: *vreun* appears in contexts which are claimed to be veridical (under *believe*, *suppose*, *imagine*) and ruled out in some nonveridical contexts (deontic modals, verbs like *want* or choice-presenting imperatives).

THE PROPOSAL: I argue its distribution can be implemented in the unified approach to polarity-sensitive items developed in Chierchia (2006, 2008). In this framework, all dependent elements are **domain widening** existential items. As such, they introduce alternatives (domain and/or scalar ones, which then expand into propositional alternatives), triggering the insertion of an exhaustification operator (5), which ultimately yields to an enriched meaning.

(5)  $Op(p, ALT(p)) = p \wedge \forall q [q \in I-E(p, ALT(p)) \rightarrow \neg q]$ ; (I-E = the set of innocently excludable, i.e. stronger alternatives that can be excluded without leading to contradiction)

(6)  $Op(p, ALT(p)) = Op(p, ALT(p))$ , if  $[p \not\subseteq \cap ALT(p)] \rightarrow [Op(p, ALT(p)) \subseteq p]$ ;  $\perp$ , otherwise

$Op$  is defined (6) either if  $p$  entails the conjunction of all true alternatives to  $p$  (as is the case in negative polarity contexts), or if the exhaustification of  $p$  and its alternatives asymmetrically entails  $p$ , i.e. if the resulting meaning is stronger than the original assertion. I show that this second condition is only met in modalized contexts, where recursive exhaustification of the alternatives triggered by *vreun* (along the lines of Fox 2006) leads to an *anti-exhaustiveness* implicature: the speaker does not want to rule out any possible alternative that could satisfy the restriction. In non-polarity and non-modal contexts, the requirements of  $Op$  are not met and the derivation crashes, resulting in ungrammaticality.

Chierchia's proposal is attractive, insofar as it derives the restricted distribution of *vreun* from its domain widening meaning, unifying the polarity and modal contexts. However, the present proposal derives a free-choice meaning for *vreun* (any domain member can satisfy the existential claim), but fails to integrate the requirement I have identified for *vreun*, namely **any alternative in  $Alt(p)$ , including  $p$ , the proposition where *vreun* occurs, can be false**, a crucial difference between free-choice items and *vreun*. In order to solve this issue, I consider two recent implementations of a similar constraint: Jayez & Tovenà 2008 on French *quelque* (who posit an 'evidential' meaning component, where the item is licensed only in cases the epistemic agent has *indirect evidence* for the existential claim), and A&M 2009 on Spanish *algun* (who derive the 'modal' meaning from the restriction on the domain of quantification, which has to contain at least two entities). Both share properties of *vreun*, but differ as far as the negative polarity status is concerned, with *vreun* being much more constrained, a property that I take as supporting the account developed by Chierchia, which allows a natural connection between polarity and non-polarity contexts. Accordingly, I argue that we need to maintain the main insights in Chierchia's approach and supplement it with further restrictions on the alternatives associated with these items.

The new facts discussed in this paper bring about interesting parallels with other dependent indefinites, whose distribution is also determined by (different types of) modality. Thus, accounting for the properties of *vreun* leads not only to a better understanding of the possible connections between negative polarity and modality, but also enables us to delineate the parameters of variation among semantically dependent items.

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# Illocutionary and propositional evidentials and epistemic modals in Cuzco Quechua

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Evidentiality, the grammatical marking of the speaker's source of information, and its relationship to epistemic modality has been the focus of an increasing number of studies in recent years, both from a typological and from a formal perspective. One recurring issue has been the question of which level of meaning evidentials and epistemic modals contribute to (e.g., Faller (2002), Matthewson et al. (2007)), the illocutionary or the propositional level. This paper has two main goals: (i) to argue, through the study of evidentials and epistemic modals in Cuzco Quechua (CQ), that evidentiality and epistemic modality can be found on both levels, and (ii) to develop a speech act analysis of the illocutionary-level evidentials and epistemic modals.

CQ possesses three evidential clitics, marking direct, reportative and conjectural evidentiality, illustrated in (1a–c), as well as a past tense marker which conveys indirect evidentiality, exemplified in (1d).<sup>1</sup>

- (1) CQ Evidentials
- a. para-mu-sha-n=**mi**  
rain-CISL-PROG-3-DIR  
*p*='It is raining.'  
speaker has direct evidence for *p*
  - b. para-mu-sha-n=**si**  
rain-CISL-PROG-3-REP  
*p*='It is raining.'  
speaker was told that *p*
  - c. para-mu-sha-n=**chá**  
rain-CISL-PROG-3-CONJ  
*p*='It is raining.'  
speaker infers/conjectures that *p*

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<sup>1</sup>Abbreviations: 3: third person, CISL: cislocative, CERT: certainty, CONJ: conjecture, DIR: direct, IRR: irrealis, NXPST: non-experienced past, PROG: progressive

- d. para-mu-sha-**sqa**  
rain-CISL-PROG-3-NXPST  

$p$ ='It was raining.'  
speaker has indirect evidence for  $p$

CQ has an epistemic modal enclitic and a irrealis verbal suffix which can be used to convey epistemic modality. These are illustrated in (2a) and (2b).

(2) CQ Epistemic modals

- a. para-mu-sha-n=**puni**  
rain-CISL-PROG-3-CERT  

$p$ ='It is raining.'  
speaker is certain that  $p$
- b. para-mu-sha-n-**man**  
rain-CISL-PROG-3-IRR  
'It might be raining.'

Note that the evidential enclitics can co-occur with both the certainty enclitic and the irrealis mood, and the latter two can co-occur with each other. Furthermore, the Direct, Reportative and Certainty enclitics can co-occur with the evidential past tense (the Conjectural can not). The enclitics have always scope over the verbal markers, but the evidential and modal enclitics do not have scope with respect to each other.

Building on previous work (Faller 2002), it will be argued that the evidential and epistemic enclitics are illocutionary operators, whereas the evidential past tense and irrealis marker are propositional operators. This accounts for the scope facts described above. The illocutionary enclitics will be analyzed as functions from speech acts to speech acts (see Vanderveken (1990) on functions on speech acts) which add to the sincerity conditions of the input speech act. For example, the direct evidential adds the condition that the speaker has direct evidence for  $p$ , whereas the certainty enclitic adds the condition that the speaker believes  $p$  with a great degree of certainty. These conditions will be formulated within the framework of possible worlds semantics.

The study and proposed analysis of the CQ evidentials and epistemic modals suggests that it is not possible to tie the notions of evidentiality and epistemic modality to a single level of meaning. Given that there exists variation already within a single language, we should not expect to find uniformity across languages either.

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## Counterfactual modal sentences in English and Persian

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This paper brings novel data from Modern Persian to bear on a debate in the literature over the source of the ambiguity of modal sentences with perfect complements like (1), which are ambiguous between an EPISTEMIC (1a) and a COUNTERFACTUAL (henceforth, CF) interpretation (1b).

- (1) a. He might have won the game (#but he didn't). *Epistemic*  
 b. (At that point), He might (still) have won the game (but he didn't). *CF*

For Condoravdi (2002), both readings involve a matrix present tense, a perfect aspect, and the modal—a future temporal operator as well as a quantifier over worlds (Abusch 1998). The difference between the two readings is derived via scope. On the scoping MOD > PERF, the modal is evaluated with respect to the present time introduced by the present tense, and an epistemic modal base; when PERF > MOD, the modal is evaluated with respect to the past time introduced by the perfect, and a metaphysical modal base, which picks out a set of future worlds branching from that past modal evaluation time.

- (2) a.  $\text{PRES}(\text{MIGHT}_{MB}(\text{PERF}(\text{he win})))$ :  $\lambda w \exists w' [w' \in \text{MB}(w, \text{now}) \ \& \ \exists t' [t' \prec [\text{now}, \infty) \ \& \ \exists e$   
 $[[\text{he win}](w')(e) \ \& \ \tau(e, w') \subseteq t']]$   
 b. *It's epistemically possible that he won the game at some time  $t$ ,  $t \prec \text{now}$ .*  
 (3) a.  $\text{PRES}(\text{PERF}(\text{MIGHT}_{MB}(\text{he win})))$ :  $\lambda w \exists w' \exists t' [t' \prec \text{now} \ \& \ w' \in \text{MB}(w, t') \ \& \ \exists e [[\text{he}$   
 $\text{win}]](w')(e) \ \& \ \tau(e, w') \subseteq [t', \infty)]]$   
 b. *At some past time  $t$ , it was metaphysically possible that he would win at some  $t'$ ,  $t \prec t'$ .*

Stowell (2004) argues that the past shifting in the CF reading is done not by a perfect but by a matrix past tense (PAST), which—following the theory of tense in Stowell (2007) and references therein—licenses a dependent *past* morpheme in the modal complement (4b).

- (4) *Stowell 2004: Epistemic vs. CF readings*  
 a. *Present perfect*:  $[\text{TP Pres Mod Perf } [\text{VP VP}]]$  *Epistemic*  
 b. *Zero past under matrix clause PAST*:  $[\text{TP Past}_i \text{ Mod } [\text{TP past}_i \text{ VP}]]$  *CF*

This analysis necessitates the assumption that the English nonfinite perfect is ambiguous between present perfect aspect and past tense (Hofmann 1966/67, McCawley 1971), since neither the modal nor its (nonfinite) perfect complement inflects for tense.

In this paper, I argue that Condoravdi's evidence in favor of treating the past shifting operator as a perfect does not rule out the possibility of a past tense, and that Stowell's arguments against the presence of a perfect are inconclusive. I propose the hybrid analysis of the CF reading in (5b), according to which the counterfactual reading involves both a matrix past tense and a perfect in the complement.

- (5) a.  $[\text{TP Pres Mod Perfect VP}]$  *Epistemic*  
 b.  $[\text{TP Past Mod Perfect VP}]$  *CF*



In contrast to Stowell, my analysis does not stipulate ambiguity of the English nonfinite perfect. Rather, the perfect aspectual morphology always maps onto perfect aspect, and the absence of a morphological distinction between present and past perfect is due to the independent morphological restriction against a finite verbal element under a modal auxiliary. It thus predicts that languages in which a restriction against finite verbal morphology under modal auxiliaries does not obtain will use past perfect morphology in the modal complement. I show that Persian is such a language: in Persian, the two noninflecting auxiliary modals *bāyad* ‘must/have to’ and *shāyad* ‘might’ are monoclausal with their complements, as are English *must* and *might* (Taleghani 2006, a.o.), but their complements are finite. As such, perfect complements, used in Persian as in English to express past possibilities, inflect for tense as well as person and number, as illustrated in (6).

- (6) a. shāyad mosābeqe-ro    borde    bāsh-e  
       maybe competition-OBJ win.PART SUBJ.PRES.be-3SG  
       *In view of the evidence at the Utterance Time (UT), it is possible that he won the race at some time  $t$ ,  $t \prec UT$*  Epistemic
- b. shāyad mosābeqe-ro    borde    bud  
       maybe competition-OBJ win.PART SUBJ.PAST.be.3SG  
       *In view of the evidence at some time  $t$ ,  $t \prec UT$ , it was possible that he would win the race at some time  $t'$ ,  $t \prec t'$*  CF

Both of the modal sentences in (6) have epistemic interpretations. Crucially, only the past perfect version in (6b) also has a counterfactual interpretation.

Assuming a pronominal analysis of the past tense (Kratzer 1998), my analysis yields the meaning in (7) for (6b). The future worlds comprising the metaphysical modal base branch from the past tense introduced by the matrix past tense, which is past both with respect to the utterance time and to the past time introduced by the perfect.

- (7) PAST(PERF(shāyad(mosābeqe-ro bordan))):  
 $\lambda w \exists t' \exists w'. t' \prec t \{t \prec now\} \ \& \ w' \in MB(w, t') \ \& \ \exists e \text{ they win the game}(w')(e) \ \& \ \tau(e, w') \subseteq [t', \infty)$

According to this proposal, both the past and the perfect make ‘real’ temporal contributions to the counterfactual meaning (cf Iatridou 2000 a.o). I suggest that the additional level of past tense in such counterfactual modal sentences is linked to the idea that the counterfactual implicature arises as a result of the SETTLEDNESS of the past event or state (Condoravdi 2002). In order for the counterfactual implicature to arise, we must understand two past times. First, we understand a past time at which a counterfactual outcome was possible; I take this time to be introduced by the matrix past tense. Second, we understand a later past time by which that window of possibility had ended; this time is introduced by the perfect.

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## Aspectual meanings in two cognitive domains: From verbs to constructions

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In this paper I discuss certain aspectual meanings that require templates larger than V or VP. The focus is on two cognitive domains, *motion* and *consumption*, because of their universality and ubiquity in human experience. I propose a way in which to account for some aspect-related morpho-syntactic and semantic properties in a number of languages usually deemed problematic in other frameworks. For example, I explain why imperfective forms are allowed in Slavic languages in situations like ‘He drank two beers’ (e.g. Serbian: ‘Pio (drink-PST-IPFV) je dva piva’) or ‘He ran two miles’ (Serbian: ‘Trčao (run-PST-IPFV) je dve milje’), rarely discussed in detail and often left unaccounted for (e.g. Verkuyl 1993, 1999). In English, the specified quantity in the direct object (‘two beers’ or ‘two miles’) indicates accomplishment in Vendlerian terms. It is often assumed that the use of perfective and imperfective verb forms in languages that have the category of grammatical aspect would follow the distinction between the specified vs. unspecified complement that exists in English (i.e. perfective for ‘He drank two beers’ vs. imperfective for ‘He drank beer’, cf. Verkuyl 1999). However, Slavic languages allow imperfective verb forms in situations such as ‘drink two beers’ or ‘run two miles’ *in certain cases*. There seems to be a requirement for a larger template with a fixed aspectual meaning, which I define as **construction meaning**. I contend that two aspectual constructions are evident in the domains of motion and consumption, namely 1) *contrastive construction* and 2) *unusual duration construction*. None of the elements in these constructions express these respective meanings but the constructions as wholes do (cf. Kay and Fillmore 1999, Goldberg 1995). These constructions are also not sums of the meanings of their parts and each of the two has a uniform and autonomous meaning in Serbian. The contrastive construction (S+IPFVP1+SPECDO+ VP2) is used to express two activities an agent was involved in, one immediately followed by another, whereby the use of the imperfective verb form is required (Serbian: ‘Meri je trčala dve milje, a ostalo hodala’ = ‘Mary walk-PST-IPFV two miles, and ran the rest’). The unusual duration construction also appears in its recognisable form (S + IPFV + SPECQ DO+ ‘FOR TIME’) and refers to events the duration of which is considered unusual for a particular domain or sub-domain (e.g. drink consumption, as in Serbian: ‘Pio je jedno pivo dva sata’=‘He drink-PST-IPFV one beer for two hours’). What kind of duration is considered ‘unusual’ may also depend on pragmatic and culture-specific contexts, which is also discussed here. I further explain why the expression ‘for TIME’ is actually a constitutive element of the construction meaning rather than a tool for assessing (a)telicity.

On a more general theoretical level, I propose a way of distinguishing among events, which simplifies previous classifications and has wider applicability than features like telicity or aspectual classes. I argue that events in all cognitive domains are best defined within a *spatio-temporal network* founded on two central notions, namely the spatial notion of *boundary* and the temporal notion of *change* and their combinations (+/–boundary and +/–change). This is very much in line with Kamp (1979), (1980), who views change as a primitive concept, on the basis of which the distinction between events that “contain” change and those that do not is essential for any theory. Similarly, the notion of boundary has been shown to carry similar weight in event differentiation (cf. Slobin 1996, 1997, Filipović 2007). The combination of the two event-defining features makes it possible to account for language variety without resorting to a search for cross-linguistic equivalents of language-specific lexical or grammatical categories. At the same time, we have a cognitively plausible model of how speakers of different languages draw distinctions among events based spatial and temporal features that indisputably pertain to universality.

In this proposed network, events in the domain of consumption such as a) ‘He drank beer’ and b) ‘He drank a beer’ can but need not be aspectually contrastive. Both may receive the temporal –*change* marker, and the contrast lies in the assignment of the spatial marker: a) receives –*boundary* and b) receives +*boundary*. Perfective verb forms in Serbian are used only when both markers boundary and change are positive. The same holds in the domain of motion, where examples like ‘Mary walked’ and ‘Mary walked a mile’ may but need not be aspectually contrastive. The presence of boundary (in this case, a quantified object or a modifier) need not automatically imply the presence of change. Koenig and Chief (2008) also provide some insight into this particular issue and introduce the term ‘incompleteness effect’ in their discussion of such instances in a number of languages.

This brings us to the profound philosophical question of whether certain features pertain to events themselves (Higginbotham 1995) or rather to event descriptions (Krifka 1992). In the domain of motion it seems that Krifka’s arguments stand. ‘He ran into the room’ (+boundary/+change) and ‘He ran in the room’ (–boundary/–change) are two different events and language reflects that. However in the domain of consumption, ‘He ate two apples’ and ‘He ate apples’ can refer to the same event and it seems that events are telic or atelic only as described (cf. Higginbotham 1995). I argue that events in the domain of consumption are always potentially quantifiable and thus inherently marked +boundary, while speakers can either express or omit the information about specified quantity so that those events become –boundary only when verbalized as such.

## Telicity and open-scale gradation in German

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The topic of this talk is the interaction between open-scale degree gradation and telicity in German. In respect of change of state verbs it will be discussed why some of them allow an open-scale gradation, and why there are other verbs which do not allow such a gradation. It will be stated that some telic verbs are compatible with an open event scale, so that different types of telic change of state verbs need to be distinguished. By this the talk investigates the relationship between durativity and gradability (c.f. Beavers 2008) in some detail for change of state verbs.

The distinction between different types of verb gradation goes back to Bolinger (1972). He distinguishes extent from degree gradation. The first type affects the temporal extent of an event (durative, iterative and so on), the second type expresses a certain intensity of a lexical feature of the verb. For extent and degree gradation varying intensifiers can be differentiated. Scale type (open vs. closed scale) leads to a further distinction between intensifiers (Kennedy & McNally 1999, 2005). In German *sehr* (*very (much)*) is an open-scale degree (adjective and verb) intensifier, while *vollständig* and *ganz* (both meaning *completely*) are closed scale degree intensifiers. For open scale extent gradation it is possible to use e.g. *viel* (*a lot*). It can be shown that adjectives and verbs which can be graded by *sehr* cannot be modified by *vollständig* (1). So these concepts are associated with open-scales (cf. Caudal & Nicolas 2005).

1 (a) *Das Haus ist sehr groß* (*The house is very big*)

(b) \**Das Haus ist vollständig groß* (*The house is completely big*)

Beside the difference between open- and closed-scales, there is a further difference in the way degree scales are realized. They can be instantiated as time-dependent or time-independent scales. In the first case there is a monotonic relation between the degrees on the scale and the time of the event. By increasing time also the degrees on the scale increase. There is no such relation in the second case. Degree gradation operates on time-dependent scales if a certain verb is related to an event scale and degree and event scale coincide. Event scales measure the progression of the event described by the verb (change of position/state verbs, incremental theme verbs, cf. e.g. Tenny (2000), Rappaport Hovav (2007)).

The gradation of psych verbs occurs on time-independent degree scales (2a), while the gradation of change of state verbs occurs on time-dependent scales (2b).

(2) (a) *Peter fürchtet Maria sehr* (lit. *Peter fears Mary very*)

(b) *Das Erdbeben verbreiterte den Riss sehr* (lit. *The earthquake widened the crack very*)

In (2a) the gradation of the verb expresses a high strength/intensity of the experiencer's feeling. In (2b) the plain verb expresses that a difference with respect to the width of a certain object comes about, while the gradation expresses that the difference is relatively large. The intensity of the feeling (in 2a) does not increase if the time of the event increases, while there is such a monotonic relation between time and the degree in the case of *verbreitern* (2b).

The gradation of psych verbs is insensitive to verbal aspect (imperfective vs. perfective), while the interpretation of the gradation of change of state verbs changes with verbal aspect. In the case of perfective aspect the gradation affects the result of the event expressed (3a), while in the case of imperfective aspect the gradation affects the rate of change (3b). So, in (3a) it is stated that the event leads to a relatively large difference between the initial and the final state. In (3b) it is stated that the change occurs in a rapid way, but nothing is said about the result of the change. This shows that verbs behave different in respect of gradation depending on the way in which the degree scale is associated to the verbal concept.

(3) (a) *Der Riss hat sich sehr verbreitert* (lit. *The crack has widened very*)

(b) *Der Riss ist sich sehr am verbreitern* (lit. *The crack is widening very*)

Open-scale gradation on time-independent scales is insensitive to telicity. For example *erschrecken* (to scare) and *fürchten* (to fear) are telic respectively atelic verbs which can be graded by *sehr*. In the case of time-dependent degree scales there is some interaction with the Vendler classification of verbs. Three relevant cases can be distinguished: achievements, degree achievements and accomplishments.

Achievements (e.g. *sterben* – to die) do not allow an open-scale gradation, the scale associated with this verbs is a two-value scale, which is always a closed scale (e.g. Rappaport Hovav 2007). On such scales no gradual change is possible, that means that neither open- nor closed-scale gradation is possible.

Degree achievements (e.g. *verbreitern* – to widen) show a variable telicity and in their atelic use the event scale is an open-scale (e.g. Kennedy & Levin 2008). As it is expected, degree achievements allow open-scale gradation.

The last case is that of accomplishments. Accomplishments are telic and two different types of accomplishments can be distinguished in respect of open-scale gradation. Verbs like *reparieren* (to repair) cannot be graded by *sehr*, but they allow a closed-scale gradation by *vollständig* (completely) or *zur Hälfte* (halfway). But there are accomplishments like *zerstören* (to destroy), *ruinieren* (to ruin) and *verschmutzen* (to pollute) which allow an closed-scale and also an open-scale gradation. This conflicts Claudal & Nicolas account of telicity, in which telicity is associated with the closeness of a scale.

The second type of accomplishments allows an absolute interpretation, which sets a fixed endpoint of the event and is compatible with closed-scale gradation, but they also allow a relative interpretation, in which no such fixed result is expressed, but just a certain difference between two states.

While atelic degree achievements and some accomplishments allow an open-scale degree gradation, there is an important difference between them. Degree achievements are analysed as expressing a comparative predication (Kennedy & Levin 2008), they do not entail a certain result state. If something widens, it gets wider, but not wide. Accomplishments on the other side entail a certain result state. If something gets destroyed at the end it will be destroyed. Beside this they allow that the result state can be exceeded, what is not possible in the case of verbs like *repair*.

The difference between accomplishments of the first type (and also resultative constructions and incremental theme verbs) and the second type of accomplishments can be stated in terms of continuability of the expressed event (Nicolay 2007, also iterability of the result state, cf. Beavers 2008: 261). If an event can be continued without that the initial state needs to be rebuild, the verb allows an open-scale degree gradation. If something is destroyed, it can get more destroyed without that it needs to be repaired first. So the same event can be continued. But if something is repaired, you cannot repair it further. One has to start a new event if the repaired thing is bust again.

In this talk it will be claimed that there are two different kinds of accomplishments, both are telic, but both behave different in respect of open-scale degree gradation. The second type allows an absolute and a relative interpretation, like degree achievements, but differs from them in entailing a certain result state. An explanation will be sketched why the two types of accomplishments behave in different ways and it is argued that telicity is quite compatible with a relative interpretation of verbs. This will question some views on telicity (like the one of Claudal & Nicolas) and demonstrate interaction between open-scale gradability and the event structure of verbs.

**1. Stative verbs** Stative verbs are non-durative, hence the ungrammaticality of (1), and non-dynamic ([–dynamic]), which means that they denote a situation in which nothing happens. Hence the impossibility of (2c), facing (2b), as an answer to (2a).

- (1) \**Marie est en train de connaître le théorème de Pythagore.*  
'Mary is knowing Pythagoras's theorem'
- (2) a. *Et après, qu'est-ce qui se passe ?*  
'What happens next ?'  
b. *Le jeune premier saute du train.*  
'After, the romantic lead jumps from the train'  
c. \**L'héroïne connaît le théorème de Pythagore.*  
'The heroine knows Pythagoras's theorem'

The subject NP of *connaître* 'know', and other verbs of its class, denotes a living being who is sentient : it has a notion or a perception of the other participants involved in the verbal relation (Davis & Koenig 2000). But there are stative verbs which do not share this property, for instance stative verbs expressing a spatial relation. The latter appear in two constructions differentiated by the semantic role assigned to the arguments in structure (i) NP0 V NP1. Examples (3) and (4) illustrate construction (A) and (B) respectively (examples tagged FK are borrowed from (Kerleroux 2004)).

- (3) A. NP0 = FIG, NP1 = GRND  
*La Baltique borde l'Allemagne au nord.*  
'Baltic sea borders Germany at North'
- (4) B. NP0 = GRND, NP1 = FIG  
*La maison comporte une terrasse.* FK  
'The house includes a terrace'

**2. Nominalizations** A nominalization is a noun morphologically derived from a verbal predicate, which allows to refer to the content of this predicate, as illustrated in (5). This acceptance corresponds to what has also been called "action noun" in the literature (Comrie & Thompson 1985).

- (5) a. Lou arrived the day after. Her **arrival** was unexpected.  
b. *La compagnie devait livrer le colis hier, mais la livraison n'a pas eu lieu.*  
'The company ought to deliver the parcel yesterday, but the delivering didn't take place'

In French as in many languages, several exponents are used by nominalizations rules to mark the deverbal nouns (cf. (6)). The talk will focus on deverbal nouns formed through rules suffixing *-age*, *-ion* and *-ment*, first because they are productive, and second because they are the only ones which overwhelmingly denote events.

- (6) -ade : *glissade* ‘gliding’, -age : *pliage* ‘folding’, -ance : *attirance* ‘attraction’,  
-ée : *arrivée* ‘arrival’, -ion : *fixation* ‘fixation’, -ment : *lancement* ‘launching’,  
Ø : *lutte* ‘wrestling’

It is generally assumed that the verbal predicate the nominalization is formed on may belong to any (Vendlerian) semantic type, as shown in (7).

- (7) State : *connaissance* < *connaître* ‘know’ ; Activity : *miroitement* < *miroiter* ‘shimmer’ ; Accomplishment : *remplissage* < *remplir* ‘fill’ ; Achievement : *franchissement* < *franchir* ‘cross ; get over’

However, while ordinary stative verbs can be nominalized without any problem on a par with [+dynamic] verbs (cf. (8)), this possibility is barred for spatial stative verbs as (9) shows.

- (8) *La connaissance du théorème de Pythagore s’avéra rapidement indispensable.*  
‘The knowledge of Pythagora’s theorem proved rapidly indispensable’
- (9) a. \**Le bordement de l’Allemagne au nord est pittoresque.*  
‘The bording of Germany at North is colourful’
- b. \**Le comportement d’une terrasse est apprécié.* FK  
‘The inclusion of a terrace is appreciated’

The ungrammaticality of (9b) sharply contrasts with the acceptability of (10b), where *comportement* is build upon a construction of the same verb involving an Agent subject NP (cf. (10a)). As for (9a), it contrasts with example (11b), where *contournement* is the nominalization of a verb which also occurs in the type (A) spatial construction.

- (10) a. *Elle s’est bien comportée à ton égard.* FK  
‘She behaved well toward you’
- b. *Son comportement à ton égard fut exemplaire.* FK  
‘Her behaviour toward you was a model’
- (11) a. *La voie ferrée contourne le lac.*  
‘The railway goes round the lake’
- b. *Le contournement du lac par la voie ferrée rallonge le voyage.*  
‘The fact that the railway goes round the lake makes the journey longer’

**3. Object** Nominalization will be used as a test to distinguish various types of stative predicates. It will be shown that the hypothesis according to which stative verbs have to contain a parcel of agentivity in order to be selected as bases for nominalization allows to account for the previous grammaticality contrasts. This hypothesis also plays a role in nominalizations not derived from a V but from a predicated A describing a state e.g. ‘être désœuvré’ (where the A may be tied to a past participle (12a) or may not (12b)).

- (12) a. *L’éparpillement des villages grecs est très grand.*  
‘The scattered state of Greek villages is very important’
- b. *Un désœuvrement d’adolescent paresseux...*  
‘Idleness of lazy teenager...’

Comrie B. & S. A. Thompson. 1985. "Lexical nominalization". In *Language Typology and Syntactic Description. Grammatical Categories and the Lexicon*, Vol. 3, Shopen T. (ed). 349-398. Cambridge: CUP. ♦ Davis A. R. & J-P. Koenig. 2000. "Linking as constraints on word classes in a hierarchical lexicon". *Language* 76 1:56-109. ♦ Kerleroux F. 2004. "Classes de verbes et règles morphologiques de construction — Lacunes dans la nominalisation?" Conference: *Les noms déverbaux / Deverbal nouns* 23-25 sept. 2004, Université de Lille 3.

### Contextual Determination in the Russian Aspect System

Although much has been written about Russian verbal aspect, many difficulties have not been solved. Traditional aspectology explains the aspectual opposition in Russian by referring to at least one of the two aspects' invariant meanings. The perfective aspect is usually said to express completeness (telicity), totality or the result of actions, while the imperfective aspect according to some linguists expresses only actions in progress or repeated actions, and according to others is supposed to have no invariant meaning at all but simply is the unmarked member of a privative opposition. The markedness theory, as applied by traditional aspectology, however, fails to explain why imperfective verb forms are used to express completed/telic actions in some contexts, while in others their use is restricted. In addition, due to its being centered on analyses of past tense verb forms, the traditional viewpoint does not sufficiently explain aspect use in the future tense, in infinitive, imperative and subjunctive constructions. Especially in language teaching the traditional viewpoints prove to be misleading, causing learners enormous difficulties in understanding the essence of verbal aspect in Russian.

Based on three basic principles the present paper aims to provide a theory that explains the use of Russian verbal aspect to learners not only in the past tense, but also in the other tenses/constructions mentioned above. For this, the vague conception of an invariant meaning is dismissed. Then, the markedness theory is applied to formulate the **principle of neutral aspect use**. This principle states that for the past and present tenses the imperfective aspect is the unmarked/neutral member of the aspect correlation, while for the other morphological paradigms (future tense, infinitive, imperative and subjunctive constructions) the perfective aspect is the unmarked/neutral member. The following examples shall demonstrate this thesis:

- (1) Past tense: Я *говорил*<sub>imp</sub> ему об этом. 'I told him about it.'
- (2) Present tense: Я *говорю*<sub>imp</sub> ему об этом. 'I tell/am telling him about it.'
- (3) Future tense: Я *скажу*<sub>p</sub> ему об этом. 'I will/am going to tell him about it.'
- (4) Infinitive: Я хочу ему *сказать*<sub>p</sub> об этом. 'I want to tell him about it.'
- (5) Subjunctive: Я *сказал*<sub>p</sub> бы ему об этом. 'I would (like to) tell him about it.'
- (6) Imperative: *Скажи*<sub>p</sub> ему об этом! 'Tell him about it!'

Neutral aspect use is dependent on the context. While in the examples above the only type of context determining the choice of aspect is of paradigmatic nature, very often other types of context determine the choice of aspect. This is the basis of the **principle of contextual determination**, which the principle of neutral aspect use is part of. A rough distinction can be made between the *paradigmatic context*, the *syntagmatic context* and the *pragmatic context* of an utterance, determining the choice of aspect in Russian.

The **paradigmatic context** has been partly explained above. Additionally, the semantic type of verb can have an impact on the choice of aspect.

The **syntagmatic context** of an utterance influences the choice of aspect through a variety of elements within the sentence structure, but also beyond the boundaries of a sentence. Definite objects, for example, cannot be linked with a certain class of imperfective verbs:



(7) \*Она *пила<sub>imp</sub>* чашку чая. 'She drank/was drinking a cup of tea.'

Among the determining elements are also the well-known examples with markers of frequency (*часто* 'often', *много раз* 'many times'), which neutrally allow the use of the imperfective aspect only.

Furthermore, the temporal structure of a narrative text determines the choice of aspect to a wide extent. Following Migirin (1973), it is claimed that syntactical conditions are not paid enough attention by traditional aspectology. Especially the relationship between verb forms beyond the boundaries of a sentence has been neglected. Perfective verb forms thus indicate a temporal sequence of actions, linking single sentences to create a narrative structure, even if there is only one verb in each sentence (usually sequences of actions are presented within the boundaries of a sentence).

The **pragmatic context** of an utterance can neutralize the syntagmatic context's role in determining the choice of aspect:

(8) Вам не надо *звонить<sub>imp</sub>* домой? 'Don't you have to call home?'

(9) Вам не надо *позвонить<sub>p</sub>* домой? 'Don't you want/would you like to call home?'

While (8) is a direct question, in which the syntagmatic element *не надо* 'there is no need' determines the choice of the imperfective aspect, (9) is an indirect speech act, in which the pragmatic context neutralizes the syntagmatic element's influence. Therefore, the above mentioned neutral aspect form in infinitive constructions (the perfective aspect) must be applied. A transformation of (9) into a direct speech act supports this thesis:

(10) Я предлагаю/советую вам *позвонить<sub>p</sub>* домой. 'I suggest/recommend that you phone home.'

By introducing the pragmatic context within the frame of contextual determination many of the difficulties mentioned at the beginning of this paper can be solved. However, the examples analyzed above propose that there must be a certain hierarchy among the different types of contexts. To reveal the nature of this hierarchy is the task of the third principle: the **principle of hierarchical context determination**, or the **complication of contexts**.

#### References (a short extract)

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### « L'épistémique est-il dérivé du radical ? Le cas de l'anglais »

Cette communication examinera, à travers le cas des marqueurs modaux anglais, les liens entre le radical et l'épistémique, dans une perspective à la fois synchronique et diachronique. L'idée que l'épistémique serait dérivé du radical est aujourd'hui très largement répandue. Depuis la fin des années 60, un grand nombre de travaux s'en sont fait l'écho en cherchant à démontrer la parenté sémantique et/ou syntaxique entre les emplois radicaux et épistémiques des modaux anglais (Ross, Boyd et Thorne, Perkins, Tregidgo, Sweetser).

Depuis quelque temps, néanmoins, des voix se font entendre pour remettre en question l'idée que l'épistémique ne serait qu'une extension du radical (Talmy, Nuyts, Lampert & Lampert). En effet, le double fonctionnement d'un marqueur donné et la primauté diachronique de sa valeur radicale ne garantissent pas, sur le plan conceptuel, l'existence d'une catégorie unique. Divers arguments sont avancés : entre autres, typologiques (la poly-fonctionnalité n'est pas la règle), transcatégoriels (les adverbes/adjectifs épistémiques ont rarement un emploi radical), et grammaticaux (le marqueur épistémique peut souvent être modifié contrairement au marqueur radical : *very likely/probable/probably* mais *\*very obligatory/permitted*).

Rejeter l'idée d'une catégorie unique ne revient pas à nier une proximité sémantique entre les deux domaines. Notre thèse est plutôt que les rapports entre l'épistémique et le radical sont du même ordre que ceux qui unissent le radical et l'aspect (*cf.* l'aspect prospectif ; Comrie 1976) ou l'épistémique et l'évidentiel (ou le temps), à savoir un rapport de contiguïté conceptuelle expliquant la poly-fonctionnalité de certains marqueurs. Cette contiguïté se reflète partout dans la grammaire : la relative incompatibilité modal radical/marqueur aspectuel est le résultat d'un conflit sémantique entre des opérations du même ordre, la nuance évidentielle (inférentielle) attribuée au *must* épistémique ainsi que la dimension épistémique du verbe évidentiel *seem* en sont une autre.

A l'instar de Talmy (2000) et Lampert et Lampert (2000), nous ferons l'hypothèse que les valeurs radicales correspondent à des configurations particulières du système de la Dynamique des Forces, tandis que l'épistémique dépend d'un autre système cognitif (*Cognitive State*).

Toutefois, l'épistémique ne se limite pas à l'expression d'une probabilité. Dans tout énoncé, l'attitude du locuteur par rapport au contenu propositionnel est communiquée ou inférable (*cf.* Hare 1970 et Lyons 1977). En l'absence de marqueur explicite, c'est la position épistémique par défaut '*I know that*' qui est inférée.

C'est, selon nous, le cas avec les modaux radicaux anglais dans leur emploi descriptif : avec *must*, *may* et *can*, le locuteur constate/affirme l'existence d'une nécessité/possibilité matérielle dont il a connaissance.

Nous expliquons l'emploi épistémique des modaux anglais par un déplacement de l'attention (*cf.* Talmy) de la modalité vers le procès conduisant à une modification du jugement épistémique. *Je sais que P est possible/nécessaire* n'implique en effet pas *Je sais que P est vraie*. Dès lors que ce n'est plus la modalité mais le procès qui est focalisé, (i) le jugement épistémique est altéré (on passe de *Je sais* à *Je crois*), (ii) ce jugement doit être explicitement marqué (ce n'est plus le jugement par défaut) – l'auxiliaire en devient donc le marqueur attribué, (iii) le degré de croyance attaché à l'auxiliaire dépend de la modalité initiale « défocalisée » (on établira donc un lien entre la force dans le radical et le degré dans l'épistémique), (iv) le marqueur peut ensuite devenir un marqueur épistémique de plein droit sans forcément impliquer une structure conceptuelle avec modalité « défocalisée » (autonomisation du marqueur).

On verra que cette explication est confirmée par les données diachroniques, dans la mesure où les valeurs épistémiques des modaux anglais ne sont pas dérivées directement d'emplois déontiques performatifs mais d'emplois constatifs (cf. Traugott & Dascher 2005) impliquant donc un épistémique de connaissance (cf. Cotte 2000) dont le changement de portée mène à un épistémique de croyance (*ibid.*) qui trouve sa source dans le caractère virtuel de la proposition modalisée.

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## Aspect and veridicality: evidence from Russian

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Previous research (Bhatt 1999, Hacquard 2006)<sup>1</sup> established an intriguing correlation between aspectual morphology on root modals and the veridicality of their infinitival complement. The generalization was proposed that the Perfective morphology [PERF] appearing on a root modal yields an actuality entailment [AE] - an uncancelable inference that the proposition expressed by the complement holds in the actual world. In contrast, the Imperfective morphology [IMP] on a root modal lacks AE effect.

Hacquard (2006) further observed that a number of constructions show the same alignment of aspectual morphology and AE. In particular, the verb meaning ‘permit’ on its MAKE POSSIBLE reading<sup>2</sup> reveals the same sensitivity to aspectual marking across several languages. French data is discussed in Hacquard (2006, p. 202-203); corresponding facts from Italian and Greek are cited in Folli and Harley (2005). The examples from Russian constructed in parallel with the abovementioned data are given in (1). The two sentences (1a) and (1b) minimally contrast with respect to the aspectual morphology on the verb *pozvolyat* ‘permit’=MAKE POSSIBLE. In (1a) where *pozvolyat* is marked with the PERF morphology the complement is entailed; an attempt to deny its realization results in a contradiction. In contrast, *pozvolyat* with the IMP morphology in (1b) does not yield AE. The complement in (1b) is averidical (the truth value is not known), thus the continuation denying its realization is acceptable.<sup>3</sup>

- (1) a. Groza **pozvol-i-l-a**<sup>PERF</sup> emu otmen-i-<sup>t</sup><sup>PERF</sup> poezdku, # no on vse-taku poeha-l  
thunderstorm-NOM **permit-suf-past-agr**<sup>PERF</sup> he-DAT cancel-suf-inf<sup>PERF</sup> trip-ACC # but he-NOM anyway go-past<sup>PERF</sup>  
‘The storm permitted him to cancel the trip, # but he went anyway’ [→ He cancelled the trip: AE]
- b. Groza **pozvol-ya-l-a**<sup>IMP</sup> emu otmen-i-<sup>t</sup><sup>PERF</sup> poezdku, no on vse-taki poeha-l  
thunderstorm-NOM **permit-suf-past-agr**<sup>IMP</sup> he-DAT cancel-suf-inf<sup>PERF</sup> trip-ACC but he-NOM anyway go-past<sup>PERF</sup>  
‘The storm permitted him to cancel the trip, but he went anyway’ [≠> He cancelled the trip: no AE]

In this paper I examine the correlation between aspect and AE with the verb *pozvolyat*, partially exemplified by the contrast in (1a) and (1b). The account of the Russian data developed in this paper departs from Hacquard’s (2006) proposal on the correlation between Aspect and AE in two important respects: (i) the analysis of the AE mechanism (ii) the treatment of the IMP morphology.

In Hacquard (2006) the mechanism deriving AE with the PERF crucially relies on the assumption that the verb in the matrix and its infinitival complement share the same Aspect-quantifier; it originates inside the complement and then moves above the matrix verb to the position under Tense. The lack of AE with the IMP is attributed to the “extra layer of modality”

<sup>1</sup> Bhatt (1999) looked at the ability reading of CAN in a number of languages with overt aspectual morphology. Hacquard (2006) examined a broader range of root readings of CAN and MUST in French and Italian.

<sup>2</sup> MAKE POSSIBLE/ENABLE reading of ‘permit’ contrasts with its GIVE PERMISSION reading, as illustrated for English in (a) and (b) respectively; a) The storm permitted (=made it possible for/enabled) him to cancel the trip. b) The boss permitted him (=gave him permission) to cancel the trip.

<sup>3</sup> The aspectual contrast for *pozvolyat* is marked by the difference in the suffix. The superscript gives the aspect of the whole verb form. Abbreviations used in the glosses: ACC-accusative, agr-agreement, DAT- dative, inf-infinitival marker, NOM-nominative, suf- suffix

associated with the imperfective morphology. Notably the account of the IMP is confined to the generic and counterfactual operators; thus the generalization on the correlation between aspect and AE is not validated against the progressive and iterative readings of the IMP- both of which are crosslinguistically common.

My paper shows that AE -mechanism relying on the unique Aspectual head raising out of the complement is not attainable in the account of the Russian data, where the aspectual marking appears both on the matrix verb and on the infinitive in the complement with both aspects making distinct semantic contribution. My account of the Russian data focuses on the progressive and iterative construals of the IMP, which did not receive treatment in the previous research on the correlation between aspect and AE (Bhatt 1999, Hacquard 2006).

This paper presents and discusses a paradigm of readings which arise in Russian with different combinations of aspectual markings on the matrix verb *pozvolyat* ‘permit’ and its infinitival complement (all the four combinations PERF-PERF, PERF-IMP, IMP-PERF, IMP-IMP are possible).

- It is argued that both aspectual markings participate in the computation and their contribution is compositional. In both cases PERF contributes quantized property, IMP-cumulative property<sup>4</sup>.
- It is shown that what ultimately matters for AE is the aspect on the matrix *pozvolyat* ‘permit’. The PERF morphology on *pozvolyat* yields AE, the IMP morphology on *pozvolyat* does not entail the realization of the complement either on a single event (progressive-like) construal or on the iterative construal, although the iterative reading pragmatically favors the implicature that the complement was realized.
- On my account of the Russian facts the aspect on the matrix verb does not come from the complement; instead it marks the quantized/cumulative property of a complex event composed by a joint predication of the matrix *pozvolyat* and its infinitival complement. I develop a uniform analysis that straightforwardly derives the AE pattern from the compositional contribution of PERF/IMP aspect in the system of Russian.

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<sup>4</sup> The notions of quantization and cumulativity are defined following Krifka (1998).

**1. GOAL:** This paper argues that the syntactic and semantic intricacies of subjunctive dependents of the Romance type (e.g. French *Je veux que nous sortions* –*I wish that we go out*) are a consequence of [5]’s *Reprojection*, a syntactic device that not only accounts for the well-known transparency properties of these structures, which importantly include the defective (=anaphoric) behavior of subjunctive tense (see [7,11,14]).

**2. BACKGROUND:** It is well-known that the tense of subjunctive clauses is parasitic on matrix verbs’:

- (1) María quiere que Juan {trabaje/\*trabajara/\*trabajare} más. (Spanish)  
 María want<sub>3SG</sub> that Juan work<sub>SUBJ-{PRES/PAST/FUT}-3SG</sub> more  
 ‘María wants for Juan to work more’

Intuitively, (1) shows that matrix and embedded tenses establish a dependency stronger than that of indicative dependents, as the latter do not display any similar (long-distance) restriction:

- (2) María dice que Juan {trabaja/trabajaba/trabjará} más. (Spanish)  
 María say<sub>3SG</sub> that Juan work<sub>IND-{PRES/PAST/FUT}-3SG</sub> more  
 ‘María says that Juan {works/worked/will work} more’

The literature offers different analyses to handle the contrast between (1) and (2), most of which suggest that subjunctives are more ‘transparent’ than indicatives, a trait that is typically related to the former having a ‘weak’ CP layer or exhibiting some ‘domain extension’-like device ([7,11,12,14,17]). Sometimes, the same mechanism is used to provide an answer to other intriguing properties of subjunctives, such as: (i) long distance obviation, (ii) long distance NPI licensing, (iii) QR into the matrix clause, (iv) complementizer deletion, (v) extraction, (vi) defective CP layer (ruling out emphatic-like fronting), etc. ([1,7,11,12,14,16,17]).

**3. A REPROJECTION ACCOUNT:** In this paper we propose an analysis of subjunctive dependents that tries to account for the tense dependency in (1) –and hopefully, can be extended to cover most of the phenomena listed above. The gist of the analysis we want to put forward is that subjunctive tense behaves like a weak quantifier (with NPI-like properties, see [1,2,17]), an idea compatible with [4]’s treatment of T as a dyadic predicate and [8]’s comparison between (strong) quantifiers and transitive (dyadic/binary) verbs.

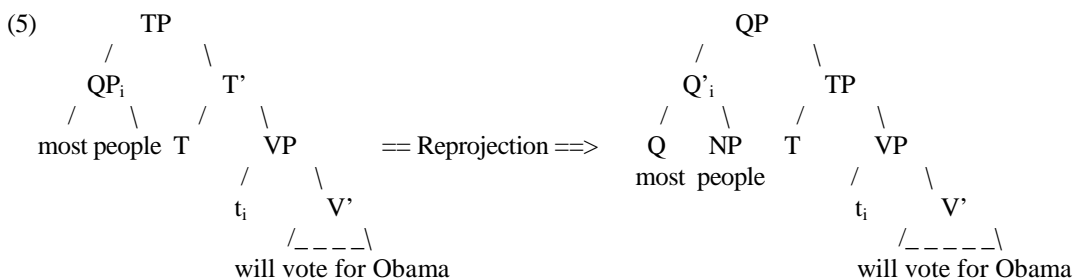
If correct, this idea readily accounts for the contextual restrictions of subjunctives, which require a modal/affective context for them to be licensed ([1,2,17]), like other NPI-like elements.

- (3) a. En Joan {té/\*tingui} molts amics. (Catalan)  
 the Joan have<sub>-{IND/SUBJ}-3SG</sub> many friends  
 ‘Joan has many friends’  
 b. \*(No) he dit que en Joan tingui molts amics. (Catalan)  
 not have<sub>-2SG</sub> said that the Joan have<sub>-SUBJ-3SG</sub> many friends  
 ‘I have not said that Joan have many friends’

Our proposal is perfectly consistent with the data in (3), but it raises the question of what other consequences it has for subjunctive T to behave like a weak quantifier. In this respect, we would like to follow [5]’s hypothesis that strong (non-symmetric) quantifiers (e.g. *most*), contrary to weak (symmetric) ones (e.g. *some*), fail to trigger an operation that they refer to as *Reprojection*. Consider (4) to see what is meant by this.

- (4) Most people will vote for Obama.

Following [8], [5] take *most* to select for two arguments: the restriction (*people*), and the scope (the entire clause, after QR, *x will vote for Obama*). As [5] note, the former is taken by first-Merge, whereas the latter requires something else, for *most* does not establish the relevant Merge dependencies with the clause at any derivational point. Following the rather standard idea that arguments must be dominated (in X-bar terms) by their predicates/selectors’ projection, [4] propose that *most* takes its second argument after the entire subject QP, *most people*, raises to SPEC-T –an argument-taking process that occurs in the covert component (LF), to avoid chain-uniformity worries. The key step of the process is shown in (5):



Apart from satisfying the thematic requirements of *most*, [5]’s *Reprojection* has one other effect, most relevant for our purposes: it turns the clause into a ‘complex specifier,’ which therefore behaves as a covert island of sorts (under the assumption that complex

SPECs give rise to CED effects; [15]). If strong quantifiers trigger *Reprojection*, then it follows –by [5]’s logic– that weak quantifiers (in the case at hand, subjunctive T) do not: this –we claim– suffices to account for the connectivity/transparency effects manifested by subjunctive dependents.

Notice that, for the proposal to work, we need for T to work like a quantifier (an idea we pursue by assuming [4]’s treatment of T as a predicate and [8]’s analysis of quantifiers as predicates). To be specific about this, we view T as the syntactic manifestation of the event quantifier (see [9]), taking the event (*qua* VP) and the entire clause (*qua* TP, the scope) as its arguments. Much like in the case of *most*, T takes its first argument (the VP) upon first-Merge, whereas the second one (the entire TP) is taken after T-to-C movement (see [10]).

Empirically, the idea that subjunctive T behaves like a weak quantifier fits with the observation that some non-Romance languages like Basque manifest a partitive/locative morpheme in C: *denik* and *zezan* (see 6 and 7a below; data from [16,17]):

(6) Jonek ez du esan [Bilbora joango denik] (Basque)  
Jon-ERG neg AUX say Bilbao-to go-FUT AUX-enik  
‘Jon did not say that he was going to Bilbao’

(7) a. Jon [Mirenek pisua gal zezan C] saiatu zen. (Basque)  
Jon-ABS Miren-ERG weight-ABS lose have-SUBJ.LOC tryPART 3.BE  
‘Jon tried that Miren lose weight’

b. Jonek [Miren polita dela C] pentsatzen du. (Basque)  
Jon-ERG Miren-ABS pretty be-C think-PART 3.HAVE.3  
‘Jon thinks that Miren is pretty’

To be sure, it is possible to analyze this element as a preposition of sorts, but we will treat it as an oblique (meaning ‘weak’) D, following ideas by [6, 13], where both D and P, and D and C are collapsed.

**4. PHASES (AND THE PIC):** It is tempting to relate lack of *Reprojection* and transparency of subjunctives to the idea of ‘derivational cycle.’ More precisely, it is tempting to analyze subjunctive dependents as (weak) phases which are not subject to ‘periodic Transfer’ through what [3] calls *Phase Impenetrability Condition* (PIC):

(8) *Phase Impenetrability Condition:* In phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ ; only H and its edge are accessible to such operations

If subjunctives are not transferred at the CP level, then there is an obvious way to account for defective (=anaphoric/agreeing) tense: all we need is for tense features in the embedded CP to receive their value from the matrix clause. In brief, we need for the scenario in (9) to arise, where we assume the matrix ‘tense’ attribute has the ‘past’ value (as in Spanish *Juan quería que viniese* –*Juan wanted for me to have come*).

(9) [ C ... T[TENSE: PAST] ... v\* ... [ C ... T[TENSE: ] ... v\*]] Long Distance Tense Dependency

If [3]’s PIC is irrelevant for subjunctive dependents, then it follows that matrix v\* will be able to probe into the embedded CP, and value the tense attribute. However, note that this is not quite enough: matrix tense comes from the T head within the matrix CP phase, not from the matrix v\*P; therefore, for matrix tense to be able to reach the embedded T, we need for matrix T to bypass the v\*P boundary, which qualifies as a *bona fide* phase. In order to get around this, we argue that matrix v\*P is turned into a weak phase too, a thesis that crucially builds on the Basque data in (7) above, which show that subjunctive morphology turns the upstairs v\*P into an unaccusative vP, as signaled by auxiliary selection: HAVE<sub>IND</sub> → BE<sub>SUBJ</sub>.

**5. CONCLUSION:** In this paper we claim that defective tense of subjunctive T follows from a long-distance dependency between matrix T and embedded T (by means of [3]’s *Agree*). Technically, the analysis requires for the embedded domain to remain ‘on-line’ until matrix T is merged, a fact that we have related to subjunctive T heading a ‘weak’ QP/phase that does not trigger *Reprojection*/cyclic Transfer.

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# FUNCTIONAL PROJECTIONS OF TAM CATEGORIES AND TRANSCATEGORIAL OPERATIONS: EVIDENCE FROM PARAGUAYAN GUARANÍ

It is well known that the world's languages vary as to which TAM distinctions are confined to finite clauses only and which are preserved in various subordinate clause types as well. This variation has been extensively discussed in (Bhat 1999) as one among manifestations of tense/aspect/mood prominence.

An interesting case of asymmetry is presented by the TAM system of Paraguayan Guaraní. In this language, future tense-relating suffixes can freely appear in non-finite clauses such as relatives marked with *-va* and nominalizations marked with *-ha* (functioning, e.g., as complement clauses with propositional semantics):

- (1) Re-hó-ta          re-jahu          porã;  
2SG.A-go-FUT    2SG.A-wash    good  
re-mondé-ta          ao          potĩ          o-ñe-me'ẽ-**ta**-va          ndé-ve,          re-karu  
2SG.A-dress-FUT    dress    clean          3A-REFL-give-FUT-REL    2SG-OBL    2SG.A-lunch  
ha          re-ha'arõ          peteĩ          karai          o-ú-**ta**-va          nde-rendá-pe.  
and    2SG.A-wait    one    gentleman    3A-come-FUT-REL    2SG-place-LOC  
'Go wash yourself well, take on a clean dress they will give you, have your lunch, and wait for the gentleman that will come to visit you'.

- (2) Ha          o-hendu-vo-ve          kamionéta          rya.pu,          o-hecha-kué-vo          yvy-timbo,  
and    3A-hear-SIM-SUP    truck          noise          3A-see-NPAST-SIM    earth-cloud  
o-ñ-andu-kuaa          i-vaí-va          oi-ko-**ta**-ha.  
3A-REFL-feel-know    3-evil-REL          3A-be-FUT-COMP  
'And when he heard the noise of a truck, when he saw a cloud of dust, he felt that something bad was going to happen'.

For most past tense markers, however, including the principle past time referring particle *kuri*, such use is not possible (Tonhauser 2006: 246-47, 264ff). In order to locate the event expressed by a subordinate clause before the topic time on the time axis, the nominal past marker *-kue* must be attached to the relativized/nominalized predicate:

- (3) Peteĩ          kuatia-ñe'ẽ          o-hai-va'e-**kue**          marino          o-mo-ngakuaa-ve  
one    paper-speech          3A-write-REL-NPAST    sailor          3A-CAUS-grow-SUP  
porandu-eta          pyahu          Rrusia          o-japó-va-re          oi-pysyrõ          hãgua  
question-many    new          Russia          3A-do-REL-RE          3A-save          in.order.to  
marino-kuéra          yga'yguy          «Kursk»          guá-pe.  
sailor-PL          submarine          «Kursk»          belonging.to-OBL  
'A letter written by a mariner raises many new questions about measures undertaken by Russia to save the crew of the "Kursk" submarine'.
- (4) Hi'ã-ko          pei-kuaa-mi          upe          karia'y-pe          o-juka-ha-**gue**  
OPT-EMPH    2PL-know-DIM    DEM    young.man-OBL    3A-kill-COMP-NPAST  
peteĩ    Nicasio          Peralta          ha'e.ño-ite.  
one    Nicasio          Peralta          alone-AUG  
'Let it be known to you that this young man was killed by someone Nicasio Peralta and by him alone'.



It is currently nearly a common assumption in formal syntax that transcategorial operations like relativization and nominalization differ with respect to which part of functional architecture of the clause falls under their scope (Alexiadou 2001). If, following (Cinque 1999), we assume a fine-grained hierarchy of functional projections at the left periphery corresponding to various TAM-markers, it naturally leads to a hypothesis that such operations should preserve those TAM distinctions that correspond to projections low enough in the functional hierarchy to fall under their scope. Higher-ordered projections may be inaccessible for transcategorial operations and thus corresponding TAM distinctions would be absent in deranked clauses.

Guaraní data provide an argument in favor of this hypothesis, regardless of whether we treat the suffix *-ta* as marking future tense or prospective aspect (see Tonhauser 2008 for discussion). Both latter projections are situated below T(Past) in Cinque's universal hierarchy. As for Paraguayan Guaraní, it can easily be shown that this language provides no exception: suffixal *-ta* appears closer to the verb stem than *kuri*, with many intervening material possible. Furthermore, it has been demonstrated by a number of semantic tests that *kuri* has a wider scope than all future-referring suffixes (Gerasimov 2008). So my claim is that in Paraguayan Guaraní the past time reference operator is not included into the domain affected by relativization and nominalization.

It still remains an open and intriguing question, however, how broadly this conclusion can be generalized and, in particular, whether all instances of TAM categories distribution discussed in relevant chapters of (Bhatt 1999) can be accounted for in similar vein. While such successful marriage of functional and formal perspectives on TAM categories looks very tempting, such generalization yields certain problems. A few tentative suggestions will be discussed.

#### Abbreviation in glosses:

A – actor; AUG – augmentative; CAUS – causative; COMP – complementizer, DEM – demonstrative; DIM – diminutive; EMPH – emphatic; FUT – future; IMP – imperative; LOC – locative; MNR – manner/comparison; NEG – negation; NFUT – nominal future; NPAST – nominal past; OBL – oblique; OPT – optative; PL – plural; RE – *-re* suffix comprising a wide range of (case-like) functions; REFL – reflexive; REL – relativizer; SG – singular; SIM – simultaneity; SUP – superlative/duration.

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# THE AMBI-PERFECTIVE IN YONGREN LOLO

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DATA BACKGROUND. In Yongren Lolo (Tibeto-Burman: Yongren County of P.R. of China), the sentence-end particle *do*<sup>55</sup>, called *ambi-perfective operator*, conveys imperfective (progressive) and perfective (immediate complete: ‘just finished’) meanings depending on the aspectual make-up of the lower clause.

## *Singular (= Punctual) Events* (Gerner 2007)

- (1) *ɔ*<sup>55</sup>*mu*<sup>21</sup>*lɔ*<sup>33</sup> *tʰie*<sup>21</sup> *ɔ*<sup>55</sup>*mu*<sup>21</sup>*ba*<sup>21</sup> *tʰu*<sup>21</sup> *lɔ*<sup>33</sup> **do**<sup>55</sup>. | only: (ii) Immediate Complete  
sky LOC flash exit come AMP  
‘A flash has just appeared in the sky.’
- (2) *zɔ*<sup>21</sup> *tʂu*<sup>33</sup>*se*<sup>21</sup> *tʰɔ*<sup>21</sup> *mo*<sup>33</sup> *ba*<sup>33</sup> *tʰu*<sup>21</sup> *zə*<sup>33</sup> **do**<sup>55</sup>. | Dispreferred: (i) Progressive  
3P SG bullet NUM:1 CL shoot exit go AMP Preferred: (ii) Immediate Complete  
(i) ‘He is shooting a bullet.’ (ii) ‘He has just finished shooting a bullet.’

[The preferred / dispreferred readings relate to the possibility of interpreting the referring event as punctual vs. extended.]

## *Quantized Events* (Krifka 1989, 1992, 1998)

- (3) *zɔ*<sup>21</sup> *a*<sup>33</sup>*zə*<sup>33</sup> *ŋ*<sup>21</sup>*tsi*<sup>33</sup> *si*<sup>55</sup> *dɔ*<sup>33</sup> **do**<sup>55</sup>. | Preferred: (i) Progressive  
3P SG water NUM:20 bowl drink AMP Dispreferred: (ii) Immediate Complete  
(i) ‘He is drinking 20 bowls of water.’ (ii) ‘He has just finished drinking 20 bowls of water.’
- (4) *tʂɔ*<sup>33</sup> *sɔ*<sup>33</sup> *mo*<sup>33</sup> *ɔ*<sup>55</sup>*du*<sup>21</sup>*di*<sup>33</sup> *tʰie*<sup>21</sup> *lɔ*<sup>55</sup> **do**<sup>55</sup>. | Dispreferred: (i) Progressive  
person NUM:3 CL doorsill LOC cross AMP Preferred: (ii) Immediate Complete  
(i) ‘Three people are crossing the doorsill.’ (ii) ‘Three people have just finished crossing the doorsill.’

[The preferred reading is implicated by the the relatively *high* number quantizing the incremental object NP.]

[The preferred reading is implicated by the the relatively *low* number quantizing the incremental subject NP.]

## *Bounded Events* (Naumann 2001)

- (5) *zɔ*<sup>21</sup> *dzə*<sup>21</sup>*pʰi*<sup>21</sup> *lu*<sup>33</sup> *tʂo*<sup>33</sup> *mo*<sup>33</sup> **do**<sup>55</sup>. | only: (ii) Immediate Complete  
3P SG money burse search perceive AMP  
‘She has just found her burse.’

## *Homogenous Events* (Quine 1960, Cheng 1973)

- (6) *ŋo*<sup>33</sup> *si*<sup>55</sup>*dzi*<sup>33</sup> *dzo*<sup>21</sup> *gə*<sup>33</sup>*sə*<sup>33</sup> **do**<sup>55</sup>. | only: (i) Progressive  
1P SG chilli eat like AMP  
‘I love eating chilli.’
- (7) *zɔ*<sup>21</sup> *ŋo*<sup>33</sup> *ɔ*<sup>21</sup>*bo*<sup>21</sup>*tɛ*<sup>55</sup> *ŋo*<sup>33</sup> **do**<sup>55</sup>. | only: (i) Progressive  
3P SG 1P SG uncle COP AMP  
‘He is my uncle [= father’s younger brother].’
- (8) *zɔ*<sup>21</sup> *lo*<sup>33</sup>*ti*<sup>33</sup> *tʰie*<sup>21</sup> *di*<sup>33</sup> **do**<sup>55</sup>. | only: (i) Progressive  
3P SG stone LOC sit AMP (**do**<sup>55</sup> obligatory with positional verbs)  
‘He is sitting on the rock.’

THEORETICAL BACKGROUND. There are two competing theories of the progressive aspect: the theory of Parson (1989, 1990) which is basically non-modal centered on the notion event, and that of Landman (1992) who views the English progressive as an intensional operator to be analyzed within possible worlds semantics. Both theories have taken pains to account for the truth conditions of the English progressive in clauses with creation verbs and in clauses whose denotations are bounded events such as *Max is crossing the street*. The examples discussed by Parson, Landman and by many more recent scholars do not apply to the Lolo ambi-perfective operator *do*<sup>55</sup>, since this particle automatically switches to the completive meaning in sentences referring to bounded events, thus avoiding most of the difficulties of the English progressive aspect. The much bigger challenge posed by the Lolo ambi-perfective operator *do*<sup>55</sup> is to provide a unified treatment of the progressive and completive meanings.

THE PROPOSAL. I propose to provide unified truth-conditions for the ambi-perfective operator in an extensional Davidsonian event semantics (as opposed to an intensional Montagueian possible world semantics). In contrast to Parson who takes the notion of culminating event as a theoretic primitive, I propose to define the idea of *culmination* in function of the four event properties: *singular* (Gerner 2007), *quantized* (Krifka 1989, 1992, 1998), *bounded* (Naumann 2001), *homogenous* (Quine 1960, Cheng 1973, Krifka 1992). Singular, quantized and bounded events naturally encode or implicate endpoints in their semantics which I take to be the culmination point. For homogenous events the culmination point is its onset point. The truth-conditions of the ambi-perfective will evaluate a relevant clause as *true* iff there is a time *t* and an event *e* such that *t* and *e* stand in the Cul relationship Cul(*t,e*).

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## English emotive factive verbs and the semantics of nonfinite complementation

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**Introduction:** The distributional differences between *to*-infinitives and gerunds as complements to embedding predicates in English are known to be at least partly determined by semantics, but no work on the formal semantics of gerunds and infinitives (Chierchia 1984; Portner 1992) has captured these differences to the extent achieved in descriptive work (Huddleston and Pullum 2002) or in functional approaches (e.g., Smith and Escobedo 2001). I provide a formal semantic account of infinitives, gerunds and embedding verbs that captures these distributional differences.

**The puzzle:** As a rule, English E(motive) F(active) V(erb)s can embed gerunds but not infinitives:

1. John {enjoyed/disliked/abhorred/appreciated/dug} {waking / \*to wake} up early.

But a small class of EFVs can embed infinitives just in case they receive a habitual interpretation:

- 2a. John {liked/loved/hated} {waking / to wake} up early **when he was younger**.

- 2b. John {liked/loved/hated} {waking / #to wake} up early **this morning**.

This is a puzzle for compositional semantics: according to standard theories, composition is strictly local. And yet in (2), it appears as though the composition of a verb with its complement is sensitive to VP-external semantic factors, as schematized in (3):

3.     [HABITUAL   [{like/love/hate} [{gerund/infinitive}]]]  
       [EPISODIC   [{like/love/hate} [{gerund/\*infinitive}]]]

**Analysis:** My explanation derives the contrast in (3) from three basic assumptions:

### Proposal 1: Type-theoretic split in nonfinite complements:

[[*to* VP]] = [[VP]] = set of (minimal) situations (type <st>)

[[VP-*ing*]] =  $\iota$ [[VP]] = the unique situation with property [[VP]] (type <s>)

I propose *-ing* is an  $\iota$ -operator, taking a property of situations and returning the unique situation that has that property relative to the context. It is thus the verbal equivalent of *the* (Chierchia 1998) and accounts for the presupposition effect in (4c) (cf. Kiparsky and Kiparsky 1970):

- 4a. John enjoyed an apple. (no presupposition)  
4b. John enjoyed **the** apple. presupposition: there was an apple.  
4c. John enjoyed eating an apple. presupposition: John ate an apple.

Second, I argue for the following variation on Chierchia's (1998) Blocking Principle:

### Proposal 2: Blocking Constraint on Verb Denotations:

for any verb V and determiner meaning D: \*[[V]] = [...D...]

This constraint together with *-ing* conspire to rule out verb denotations like (5) which incorporate an  $\iota$ -operator into their meaning, so that instead, emotive factive verbs must take the form in (6):

5.  $*[[\text{like}]] = \lambda P \langle \text{st} \rangle \lambda x \lambda s . x \text{ likes } tP \text{ in } s$  (violates Blocking Constraint)  
 6.  $[[\text{like}]] = \lambda s_1 \lambda x \lambda s_2 . x \text{ likes } s_1 \text{ in } s_2$  (satisfies Blocking Constraint)

Thus we derive the fact that ordinarily, emotive factive verbs must combine with gerunds.

Finally, to explain the puzzle at hand—why *like*, *love* and *hate* can embed infinitives just in case they are interpreted habitually—I propose the following lexically-governed type-shifting rule:

**Proposal 3: E(motive) F(active) V(erb) type-shifting rule:**

If  $EFV \in \{\text{like}, \text{love}, \text{hate}\}$ , then let  $[[EFV']] = \lambda P \lambda x \lambda Q \lambda s_2 . Q(P(s_1)) ([[EFV]](s_1)(x)(s_2)) = 1$   
 (where  $P = \langle \text{st} \rangle$  and  $Q = \langle \text{st}, \langle \text{st}, t \rangle \rangle$ )

The output of the type-shifting rule has two important properties: it selects directly for a type  $\langle \text{st} \rangle$  function, thus (together with Proposal 1) ensuring an infinitival complement, and second, it selects for a quantifier, thus ensuring that an infinitival complement is licensed just in case an appropriate quantifier (such as that contributing habituality, or an overt quantificational adverb) is present in the structure to bind the infinitive's situation variable. By encoding sensitivity to quantification in the output of the type-shifting rule, we explain the pattern in (3) and preserve locality of composition.

**Independent support:** Proposal 1 correctly predicts three embedding contexts that allow infinitival complements and not gerundive complements:

1. **Implicative verbs** entail their complement (7) (Karttunen 1971). This is captured on the view that they combine directly with properties of situations and simply pass up their content, adding a conventional implicature (in the case of *manage*, of success despite difficulty):

7. John **managed** [ $\{\text{to solve}/*\text{solving}\}$  the puzzle].  $\rightarrow$  John solved the puzzle.  
 8.  $[[\text{manage}]] = \lambda P \langle \text{st} \rangle \lambda x \lambda s . P(s) \wedge \text{agent}(s) = x$  (+ conventional implicature)

2. **Irrealis/future-oriented verbs** leave the truth of their complement unspecified (9). This is captured on the view that they quantify over possible situations (Portner 1992, 1997) (10):

9. John **wanted** [ $\{\text{to walk}/*\text{walking}\}$  in the park], (but maybe he never got a chance).  
 10.  $[[\text{want}]] = \lambda P \langle \text{st} \rangle \lambda x \lambda s . \forall s' [s' \text{ is a wanted situation for } x \text{ w.r.t. } s] \rightarrow [P(s') = 1]$

3. **Factive adjectives** presuppose their complement (11). By hypothesis they involve causation ((11) = "John heard the good news and **as a result** he was happy") and hence, on Lewis's (1973) approach to the semantics of causation, the content of the infinitive is mapped onto the restriction of a counterfactual conditional operator (12).

11. John was **happy** [ $\{\text{to hear}/*\text{hearing}\}$  the good news]. *Presupp.*: John heard the news.  
 12. L.F. = If [John had not heard the good news], [he would not have been happy].

$\langle \text{st} \rangle$

$\langle \text{st} \rangle$

Thus infinitives and not gerunds are licensed in contexts that call for an unsaturated situation variable, in accordance with Proposal 1.

**From nominalizer to tense-aspect-mood marker:  
Semantic extensions from referential to non-referential uses**

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It has been observed that nominalizers may develop into tense-aspect-mood (TAM) markers. This is attested in Tibeto-Burman languages, for example in modern Tibetan dialects (DeLancey 1997, Saxena 1997, Denwood 1999), Sunwar, Kuki-Chin, Classical Tibetan and Lolo-Burmese (Delancey, in press), Chantyal (Noonan 2008), Limbu (van Diem 1987, 1993) and Kham (Watters 2002, 2008). In this paper, we will examine this phenomenon in Magar, a Tibeto-Burman language of the Bodic family. In particular, we analyze four nominalizers (*-ke*, *-ma*, *-o* and *-cyo*) and trace how the first three developed into aspect markers, and how the latter two came to express speaker attitude, specifically mirativity, which is understood as "the grammatical marking of unexpected information" (DeLancey 1997:33).

Analysis of the development of nominalizers *-ke*, *-ma* and *-o* provides insight into how a grammatical morpheme which marks a referential element may be recruited to serve a non-referential function in the predication domain. Specifically, we see how a nominalizer is reanalyzed as an aspect marker, often via copula constructions as an intermediate stage. This is illustrated as follows: *kan-ko jfurum-ke nefi-le* 'We begged to assemble here.' → *kan-ko jfurum-ke le* '(It is the case that) we have yet to assemble.' → *kan-ko jfurum-ke* 'We have yet to assemble.', as in (1).

(1) Uses of *-ke* as nominalizer and aspect marker

|  |  |
|--|--|
| Copula construction with nominalized clause: | (NP) [VP- <i>ke</i> ] nominalized clause <i>le</i> <sub>copula/imperfect</sub> |
| Non-embedded nominalization construction:    | (NP) VP- <i>ke</i> imminent aspect (irrealis mood)                             |
| (reanalyzed as a finite clause)              |  |

In addition, analysis of the developments of *-o* and *-cyo* allows us to see how a nominalizer may come to express speaker stance (i.e. mood), specifically as a mirative marker, as for example *ho-se sefi-cyo ale* 'She is a beauty.' → *ho-se sefi-cyo le* 'She is beautiful.' → *ho-se sefi-cyo* 'She is beautiful!', as in (2). We see a nominalization construction being used as a predicate nominal, a predicate adjective, and in a non-embedded mirative construction (in the absence of a copula), i.e. it extends from referential to modificational to attitudinal usage.

(2) Uses of *-cyo* as nominalizer and mirative marker

|   |   |
|---|---|
| Copula construction (equative):           | (NP) [VP- <i>cyo</i> ] nominalized clause <i>ale</i> <sub>copula</sub>          |
| Copula construction (predicative):        | (NP) [VP- <i>cyo</i> ] nominalized clause <i>le</i> <sub>copula/imperfect</sub> |
| Non-embedded nominalization construction: | (NP) VP- <i>cyo</i> mirative  |
| (reanalyzed as a finite clause)           |   |

Magar nominalizers each have discrete functions and are at different stages of grammaticalization from nominalizer to TAM and / or stance marker. They also evince different degrees of transparency in their progress along this pathway. Other Tibetan languages manifest analogous developments, and beyond this, parallels may be found in Chinese (Simpson 2003) Korean (Yap & Matthews 2008) and Badhîî Kurdish (Haig, in press). Such development from referential to non-referential uses reflects a cognitive tendency for semantic extension.

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## Underspecification in a degree modifier: The case of *çok* ‘very, much, well’ in Turkish

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This paper focuses on the semantics of an underspecified degree word *çok* ‘very, much, well (too, a lot)’ in Turkish and argues that scalar structure interacts not only with event structure but also with argument structure. Unlike *very*, *much* and *well* which select deverbal adjectival (-ed) predicates based on scale structure (cf. Kennedy & McNally (2005)), *çok* can co-occur with almost any gradable entity without a totally closed scale provided that argument structure is morphologically explicit.

In (1), *çok* expresses the degree/intensity of the feeling of surprise with the participle derived from a psych-verb expressing a change of state. In (2), the study concerned may have been criticized by many people, on many occasions or from many respects. In the slightly infelicitous (3), the claim may have been documented many times, by many people, with many documents, but not with skill. Unlike *well*, *çok* does not have a manner reading, which may be expressed by the adjective/adverb *iyi* ‘good.’

- |     |                            |  |  |                                |
|-----|----------------------------|--|--|--------------------------------|
| (1) | durum-a<br>situation-DAT   | çok<br>çok                                 | şaşır-mış<br>become surprised-PERFPART | bir konuşmacı<br>a speaker-NOM |
|     | ‘a very surprised speaker’ |  |  |                                |
| (2) | çok<br>çok                 | eleştir-il-miş<br>criticize-PASS- PERFPART | bir çalışma<br>a study-NOM             |                                |
|     | ‘a much criticized study’  |  |  |                                |
| (3) | ?çok/iyi<br>çok/good       | belgele-n-miş<br>document-PASS- PERFPART   | bir iddia<br>a claim-NOM               |                                |
|     | ‘a well documented claim’  |  |  |                                |

The collaboration of grammatical function-changing morphology and theta roles seems crucial in obtaining manner vs. degree readings in Turkish. In (4) below both *çok* (degree) and *iyi* ‘good, well’ (manner) are felicitous, but *tamamen* ‘completely’ (endpoint-oriented/closed scale) is not. In contrast, in the homophonous (5), *çok* is not felicitous, whereas *iyi* and *tamamen* are. The misleading homophony in (4-5) is only due to the homophonous allomorphs of passive and reflexive morphemes, but the real difference lies in argument structure linked with event structure. In the reflexive (4), there is an atelic activity/process with an Agent subject. In the passive (5), there is a telic accomplishment with a totally affected Theme object. *Çok* can felicitously have scope over the atelic activity of preparing oneself with the reflexive and passive participle in (6) because the property of preparedness can be attributed to the (implicit) Agent speaker.

- |     |  |  |                              |
|-----|--|--|------------------------------|
| (4) | çok/iyi/*tamamen<br>çok/well/completely                                    | hazır-la-n-mış<br>ready-DERIV-REFL- PERFPART         | bir konuşmacı<br>one speaker |
|     | ‘a speaker who has prepared herself a lot/well/*completely’                |  |                              |
| (5) | *çok/iyi/tamamen<br>*çok /well/completely                                  | hazır-la-n-mış<br>ready-DERIV-PASS- PERFPART         | bir konuşma<br>one talk      |
|     | ‘a talk which has been prepared *a lot/well/completely’                    |  |                              |
| (6) | çok/iyi/*tamamen<br>çok /well/completely                                   | hazır-la-n-ıl-mış<br>ready-DERIV-REFL-PASS- PERFPART | bir konuşma<br>one talk      |
|     | ‘a talk for which the speaker has prepared herself a lot/well/*completely’ |  |                              |



Moreover, in (7-8), the passive marker appears on both of the predicates expressing the same telic accomplishment, but only (7) allows a degree reading because in (8) the grammatical subject is the incremental Theme, whereas in (7) it is the Goal. In fact, McNally & Kennedy (2005) rightly account for the degree vs. manner readings of polysemous *well* by positing two entries for *loaded*, i.e. *loaded-on* vs. *loaded-with*, which differ in their argument structure (also cf. Kennedy (2007)).

- (7) Bu kamyon                      çok/?tamamen/iyi                      yükle-n-miş.  
       this truck                      çok /completely/well                      load-PASS-mİş-3sg  
       ‘This truck has been loaded a lot (too much)/?completely/well.’
- (8) Saman                      (kamyon-a) \*çok/tamamen/iyi                      yükle-n-miş.  
       the hay-NOM                      truck-DAT çok /tamamen/well                      load-PASS-mİş-3sg  
       ‘The hay has been loaded (onto the truck) \*a lot/completely/well.’

In short, as long as the thematic roles of the arguments are clearly marked by grammatical function-changing morphology on the participle, *çok* can take scope over cumulative/atelic/non-closed scale entities with gradable properties. Turkish data seem to suggest that Krifka’s (1989) analogy between cumulativity (in nominal reference) and atelicity (in temporal constitution) is further paralleled in open (relative standard)/lower-closed (minimum absolute standard) scales in scale structure. However, scalar structure cannot properly account for the facts about *çok* illustrated in (4-8) above unless it allows access to argument structure, which is essential for Turkish participles which do retain the argument structure of their source verbs (cf. Aksu-Koç (1988)) unlike their English counterparts with little ‘verbal force’ (cf. Quirk & Greenbaum (1973:140-141)) as in (9a) vs. (9b).

- (9) a. They were (\*very) relieved by the next group of sentries.  
       b. They were (very) relieved to find her at home.

To conclude, although Turkish is well known for its underspecified tense/aspect/modality morphology requiring specific adverbs for proper interpretation, the degree modifier/quantifier *çok* seems underspecified enough to co-occur with verbs, nouns, adverbs, adjectives and participles. It is argued that this underspecification is compensated by the rich grammatical function-changing morphology which reveal the argument structure, explicitly specifying which gradable properties are attributed to which participants.

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This paper presents evidence from progressive constructions and the interaction of duration adverbials with tense that stative predicates are true at moments, while eventive predicates are true at intervals.

Vlach (1981) points out that progressive predicates pattern with stative predicates in a number of respects, including selection of the auxiliary *be* (1), incompatibility with the progressive (no ‘double progressive’) (2), and their interpretation in the context of point adverbials (3): when a point adverbial modifies a stative predicate, it specifies a point during that state (the arrival happens during the being ready in *Max was ready when I arrived* and during the leaving in *Max was leaving when I arrived*), but when it modifies an eventive predicate, it specifies a point immediately anterior to that event (the arrival happens just before the leaving in *Max left when I arrived*).

|     | State                    | Progressive                | Event               |
|-----|--------------------------|----------------------------|---------------------|
|     | Max. . .                 | Max. . .                   | Max. . .            |
| (1) | was ready                | was leaving                | *was leave          |
| (2) | *was being ready         | *was being leaving         | was leaving         |
| (3) | was ready when I arrived | was leaving when I arrived | left when I arrived |

Recent analyses of the progressive construction characterize it as an event predicate, that is true of an event  $e$  when it bears a certain relation  $R$  to another, possible, event  $e'$  (4) (Landman 1992, Portner 1998, a.o.). Analyses differ on the details of  $R$ , but one commonality is the requirement that  $e$  be a subpart of  $e'$  in any world in which  $e'$  exists, since the existence of  $e'$  implicates the existence of  $e$  (5) (Dowty 1979).

$$(4) \text{ PROG}(P)(e) = 1 \text{ iff } \exists e' P(e') \ \& \ R(e, e')$$

$$(5) \text{ John crossed the street} \models \text{John was crossing the street}$$

While such approaches successfully capture the modal character of the progressive, they do not derive its aspectual stativity. On the contrary, the subpart requirement predicts that for downward monotonic event descriptions like *sleep*, whose every subpart is a sleeping event, the progressive derivative should have the same aspectual character as the preterit counterpart. If *Max was sleeping* is true of a subpart of a sleeping event, then it is true of a sleeping event, and should pattern aspectually like its preterit counterpart *Max slept*.

I propose that progressive predicates are true at moments (6), while eventive predicates are true at intervals (7), and it is the momentary nature of the progressive that gives it the ‘internal perspective’ on the underlying event that point adverbials link to. And I propose that progressives pattern like states because being true at

a moment is characteristic of states in general, which are insensitive to change over time (8). Below,  $e$  is an eventuality,  $t$  a moment,  $i$  an interval and  $\tau$  a function from eventualities to their duration.

- (6)  $\text{PROG}(P)(e)(t) = 1$  iff  $t \in \tau(e) \ \& \ \exists e' \ P(e') \ \& \ R(e, e')$
- (7)  $\text{P}_{\text{EVENT}}(e)(i) = 1$  iff  $P(e) \ \& \ i = \tau(e)$
- (8)  $\text{P}_{\text{STATE}}(e)(t) = 1$  iff  $P(e) \ \& \ t \in \tau(e)$

The hypothesis that progressive and other stative predicates are true at moments is corroborated by the following considerations. First, both may occur in the simple present tense in English, in contrast to eventive predicates (9), which follows assuming that the simple present tense links the event time to the moment **now** (10) (or a reference time that is **now** by default). Eventive predicates are incompatible with the simple present tense because the interval they are true of cannot be equated with **now**, since it is not a moment.

- (9)    a. Max is ready     b. Max is leaving  
        c. \*Max leaves (on the ‘indicative’ reading)
- (10)   PRES( $P$ )( $e$ )( $t$ ) = 1 iff  $P(e)(t)$  = 1 &  $t$  = **now**

That **now** does not have duration is suggested by the incompatibility of present tense with duration adverbials like *for an hour* (11), which Moltmann (1991) claims quantify over subparts of intervals. The infelicity of (11) falls out from the incoherence of equating each moment in an hour long interval with **now**. *For an hour* is correctly predicted to be compatible with the past tense (12).

- (11) \*Max is ready for an hour  
 $\exists i \text{ hour}(i) \ \& \ \forall t \in i \text{ Max is ready}(t) \ \& \ t = \mathbf{now}$
- (12) Max was ready for an hour  
 $\exists i \text{ hour}(i) \ \& \ \forall t \in i \text{ Max is ready}(t) \ \& \ t < \mathbf{now}$

These observations lend credence to the view that progressives pattern like states because like states, they are interpreted at a moment of time, unlike events, which are interpreted at an interval.

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## Aspect and stative verbs : new insights

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Many a study (Buyssens 1968, Scheffer 1975 *inter alia*) has shown that there is a hierarchy among stative verbs used in the progressive form (PF) but no fine-grained analysis has been conducted, taking into account statistics among the different categories of stative verbs, along with the various types of markers of subjectivity occurring with the forms examined. The goal of this study is to offer new insights into the relationship between aspect and stative verbs.

The empirical study will be set up in the spoken part of the demographic section of the *British National Corpus* (BNC), since the PF is the most used in spoken English, which reflects the speaker's spontaneity, and thereby his subjectivity, namely the linguistic marking of his attitudes and his emotions (see Dennis 1940 and Strang 1982, among others).

Here are the main results. Among the categories of stative verbs used with the PF, the verbs of mental state, especially verbs of cognition, are the most used. Then comes the category of verbs of existence and relation, the verbs of location being the most numerous. Among the three categories of markers of subjectivity used with the PF, the markers of affect are the most employed, the epistemic markers standing second and the deontic markers lying far behind. Among the markers of affect, the markers of appreciation are the most popular, followed by markers of quantity, the markers of moral evaluation and punctuation being rare. Among the epistemic markers, the markers of doubt and certainty are privileged.

We shall also offer an analysis of the different semantic values of the stative verbs used in the PF by relying on Traugott and Dasher's (2002) subjectivity cline, which will lead us to propose a unifying interpretation of the subjective values of stative verbs in the PF.

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## The aspectual properties of French deverbal state nouns

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Many analyses of the aspectual properties of deverbal nouns focus on nouns referring to dynamic eventualities. These studies discuss the types of events at stake (e.g. activity vs. accomplishment), or the potentially ambiguous status of such nouns (which may refer to actions or to results, cf. Grimshaw (1990)). Derived state nouns are surprisingly overlooked in the literature, though they raise a number of intriguing issues.

The first issue is the definition (of the set) of deverbal state nouns, and the description of their distinctive features. State nouns differ from nouns referring to events in that they denote non-dynamic, atelic and homogeneous situations (i.e., the eventualities they refer to do not have stages, cf. Rothstein (2004) *inter alia*). In other words, states are mainly defined by what they are not. State nouns are thus consistently rejected in structures selecting for dynamicity or telicity. For instance, state nouns cannot be the objects of the verbs *faire du N*, *effectuer un N*, or *procéder à un N*, just as they cannot be the subjects of predicates such as *avoir lieu*, *se produire*, *se dérouler*, *être en cours*:

- 1) \**Jean a procédé à / effectué une croyance le mois dernier.*  
= *Jean undertook / made a belief last month.*
- 2) \**La dépendance de Jean a eu lieu / s'est produite / s'est déroulée l'an dernier.*  
= *John's dependence took place / occurred / developed last year.*

Such results show that deverbal state nouns clearly differ from other nominalizations. Yet this semantic class seems to resist a more specific description: very few – if any – linguistic tests yield acceptable results when applied to the whole class. This difficulty may indicate that the class of deverbal state nouns is not as homogeneous as other classes of deverbal nouns (such as nouns denoting activities); this class seems to consist of a cluster of distinct subclasses. Now, some tests help to discriminate subclasses of state nouns. Nouns denoting properties (corresponding to individual-level predicates) can be used predicatively, or used as genitives (Flaux and Van de Velde (2000)).

- 3) *Il est d'une grande persévérance.*  
= *He is very persevering.*

They differ from nouns denoting physical or emotional states (corresponding to stage-level predicates), which can be the arguments of verbs such as *éprouver* or *ressentir* (example 4), or be paraphrased by the noun phrases *état de N* / *sentiment de N* (example 5).

- 4) *Il éprouva une grande déception.*  
= *He experienced a profound disappointment.*
- 5) *Il était dans un état de grand agacement.*  
= *He was in a state of great annoyance.*

These two subclasses differ from nouns denoting abilities, which are compatible with the structure *la capacité de N*, and are not scalar.

- 6) *Sa perception est altérée. // Sa capacité de perception est altérée.*  
= *His perception is affected. // His ability to perceive is affected.*

A final subclass may be distinguished: nouns referring to epistemic stance, which may refer to a state or to a propositional content.

- 7) *Il avait du mal à cacher sa conviction.*  
= *He had trouble concealing his conviction.*

The analysis of these different classes obviously involves a reflection on their deverbal status. More precisely, it calls for an examination of the aspectual properties of the verbs these nouns are derived from, as they raise the issue of aspectual inheritance. Are all deverbal state

nouns derived from state verbs? How far can the aspectual properties of state nouns be considered to be inherited from the initial verb? Can deverbal state nouns reveal some aspectual properties of the verbs they are derived from?

We will argue that (at least) three different patterns can be identified. First, deverbal nouns may inherit the aspectual properties of the verb they are derived from. Either the verb is a state verb, the derived noun being a state noun (example 8), or the verb has two readings (e.g. as a state verb or as an accomplishment verb), the derived noun being equally ambiguous (examples 9/10).

8) *Ce symbole signifie “il existe”. / La signification de ce symbole est “il existe”.*  
= *This symbol means “there exists”. / The meaning of this symbol is “there exists”.*

9) *Cette situation le satisfait pleinement. / Sa satisfaction était visible.*  
= *He is satisfied with this situation. / His satisfaction was obvious.*

10) *Le ministre a satisfait les revendications des grévistes. / La satisfaction des revendications a été saluée unanimement.*  
= *The minister fulfilled the strikers’ demands. / The fulfilment of the demands was unanimously welcomed.*

However the inheritance of aspectual properties is not systematically straightforward. Deverbal nouns may inherit only some of the aspectual properties of the verb: the initial verb may have two readings (e.g. as a state verb or as an accomplishment verb), the derived noun being only stative:

11) *Il a admiré ce paysage pendant des heures. / \*Son admiration a eu lieu hier.*  
= *He admired this landscape for hours. / His admiration took place yesterday.*

12) *Il admire son frère. / Son admiration pour son frère est sans bornes.*  
= *He admires his brother. / His admiration for his brother knows no bounds.*

Finally, there may be a discrepancy between the aspectual properties of the deverbal noun and those of the original verb. This situation seems quite frequent when the initial verb describes the causation of a state:

13) *Jean a étonné Marie. / On peut comprendre l’étonnement de Marie.*  
= *Jean surprised Marie. / Marie’s surprise is understandable.*

The in-depth analysis of these patterns and of the constraints they obey may help to determine the specific properties of deverbal state nouns, and to deepen the understanding of different forms of aspectual inheritance.

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# Toward the Typology of Stativization: The Polysemous Behavior of the Japanese *-te iru* Form

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The principal purpose of this paper is to explicate the compositional nature of stativization. The Japanese *-te iru* form is said to have at least five aspectual meanings: progressive, result state, iterative, perfect and simple state. It is known that in unmarked cases, the *-te iru* forms of activities and accomplishments are progressive and those of achievements are result state; sentence internal as well as contextual information may affect their interpretations. While the morphology of *-te iru* indicates that it is a stativization construction, no unified account of the phenomena has been given because of the lack of the compositional understanding of the concept.

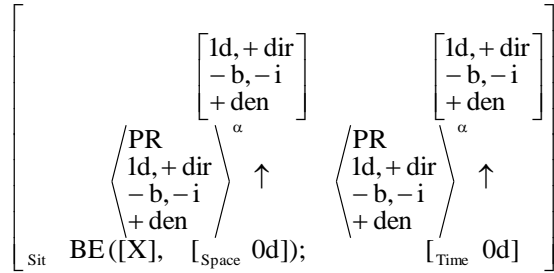
This paper presents an argument that a proper treatment of the notion stativization is given by modifying and developing Jackendoff's (1996) theory of sp-binding and that the semantic types of the *-te iru* forms are derivable accordingly, which will suggest the direction of the study of the typology of stativization in general (cf. DeSwart 1998, Michaelis 2004).

Sp-binding captures the spatio-temporal characteristics of events by decomposing EVENT into STATE and projecting axes, among which space/property and temporal projections have direct relevance here. According to Jackendoff (1996), these axes may or may not project and may or may not be sp-bound. Their combination eventually defines event types. If events are defined by projecting a state, states must also be definable by extracting a cross-section out of the projected event. I will call the extracting function CRS and argue that the types of stativization are determined by the combination of arguments to which CRS applies.

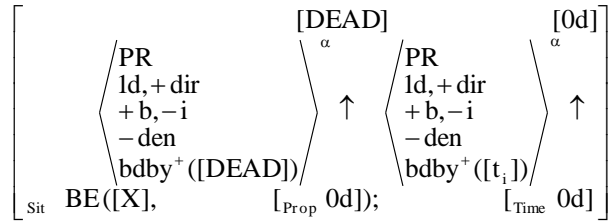
I will adopt Jackendoff's (1991) aspectual distinctive features [+/-bounded] and [+/-internal structure] and aspect transformation functions (ATF), GR, COMP and PL as well as rule of construal or coercion (cf. Jackendoff 1991, 1997, Pustejovsky 1995). Furthermore I will make necessary modification to sp-binding structure in order to make the system work. First, I will modify his projection structure suitable to function-application, so that the input-output relation may be more explicit. Jackendoff's "projection" is classified as one of the ATFs called PR. Second, I will introduce motion-change dichotomy by means of a single distinctive feature [+/-dense], which was proposed by Iwata (1999) for a different theoretical purpose. Here [+/-dense] is associated with PR and the boundedness feature [+/-bounded], so that in unmarked cases projection is either [+dense, -b] or [-dense, +b], the former pertaining to motion and the latter, change. Introduction of [+/-dense] reconstructs the theory into a dynamic computational model that explains the problems concerning stativization.

In the modified sp-binding theory, activities and achievements have the partial CSs as follows:

(1) a. Activity e.g. *run*

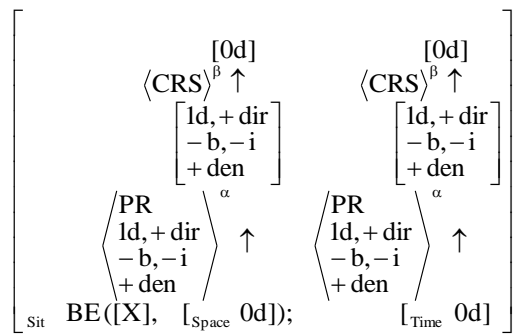


b. Achievement e.g. *die*

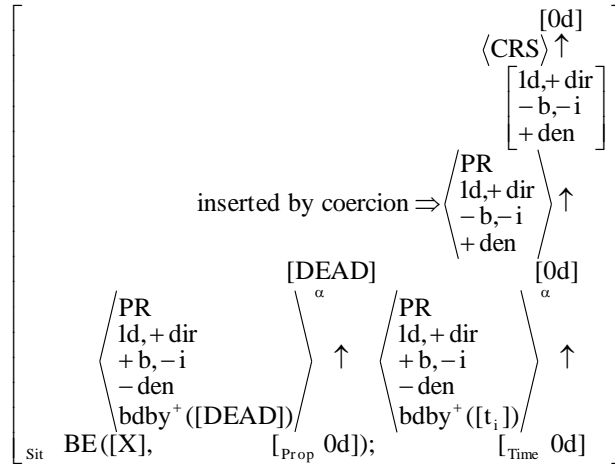


I will claim that Japanese *-te iru* has the LCS in which CRS applies only to the temporal argument. Since ATF applying to an argument also applies to its sp-bound argument unless there is a hindering factor (The Principle of Parallel Application of ATF (PPAA), Iwamoto 2008), the *-te iru* forms of activities and achievements yield the following CSs.

(2) a. *-te iru* form of activity



b. *-te iru* form of achievement



With activities, since there is no hindering factor, CRS applies to the sp-bound second argument as well by PPAA, defining the CS of progressive. With achievement, on the other hand, CRS cannot be applied to the second argument. In order to apply CRS to the temporal projection,  $\langle \text{PR} | [+dense, -b] \rangle$  is introduced by coercion, since it applies only to  $[+dense, -b]$ . But the same cannot be introduced to the second argument, since it is a constant state, which is unprojectable. (2b) represents the meaning “remaining in the state”, the structure of result state. The two basic meanings of *-te iru* as well as other derivative meanings are defined mechanically by the computational system of the present theory.

It also explains the difference between the Japanese *-te iru* form and progressive constructions in English and other languages. In the latter, CRS necessarily applies to both the temporal and space/property projections so that the internal structure of the CSs of achievement verbs such as *die* and *break* are modified, to serve to render the “internal view point” interpretations (cf. Comrie 1976, Smith 1997, Shirai 2000).



**Scalar vs. Absolute Aspect: Evidence from Acquisition**  
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Words like “more,” among a child’s first, as well as evidence of early use of gradable and non-gradable adjectives (Syrett 2007) suggest that scalar phenomena are both cognitively and linguistically available to young children. Nevertheless, there is also evidence that, where an option for absolute distinctions exists, children prefer them. For instance, Borer & Wexler (1987) argue that resultative, adjectival passives are first, before the gradient character of a verbal passive. Thus *the doll was combed/torn* refers to a result state and not an activity. Telic phenomena, we argue, likewise carry either an incremental reading (1a) or an absolute aspectual interpretation (1b):

- (1) a. John ate the cake.  
b. John ate the cake up.

Telic interpretations of incremental theme verbs (ITVs) such as (1a) are based on an underlying scalar representation as determined by the physical extent of the object that is consumed (the cake), where the scale is bounded by the object’s maximal extent (Beavers 2008, Kennedy & Levin 2008, Ramchand 2008). Given the right context, the cake may be consumed entirely or only partly for (1a) to be true. Interpretations upon which the maximal, final bound (the end of the cake) is reached are optional, which suggests that such interpretations arise for ITVs via conversational implicature (Filip 2008).

Aspectual interpretations of particle verbs (PVs), on the other hand, are absolute. (1b) is only true when the event of eating the cake is completed. Completion interpretations—referring to the maximal bound—are obligatory whenever the particle *up* is projected. Moreover, the particle may exclusively focus on the final boundary, identifying the resultative sub-event and disregarding the process leading up to it (Jeschull 2007a,b, Ramchand 2008), cf. *John ate most of the cake, but Bill ate it up*. Evidence for this sub-event property of PVs—picking out bounded interpretations—comes from inceptives, since PVs are not restricted to completion interpretations but also extend to inception, e.g. *doze off, drive off*. This is impossible with ITVs.

Acquisition studies have found that children between the ages of 3 and 6 treat PVs differently from ITVs: children interpret PVs correctly at an earlier age and associate them with aspectual interpretations more frequently than ITVs (see van Hout 2001, Schulz & Penner 2002, Jeschull 2007a,b). Table 1 summarizes the results of these comprehension experiments for English, Dutch, and German children as well as adults. (The methods used and the age ranges of children varied by experiment, which leads to the variability in responses.)

Table 1 Proportion of completion responses for ITVs and PVs

| Study                         | Children  |            | Adults     |            |
|-------------------------------|-----------|------------|------------|------------|
|                               | ITVs      | PVs        | ITVs       | PVs        |
| English (van Hout 2001)       | 45%-56%   | 62%-91%    | 25%        | 81%        |
| Dutch (van Hout 2001)         | 17%-47%   | 50%-90%    | 78%        | 100%       |
| German (Schulz & Penner 2002) | 44% / 98% | 96% / 100% | 48% / 100% | 98% / 100% |
| English (Jeschull 2007a)      | 25%-56%   | 33%-67%    | 49%        | 91%        |
| English (Jeschull 2007b)      | 10-23%    | 50-65%     | 3%         | 67%        |

Not only children, but also adults consistently interpret ITVs and PVs differently, when asked ‘Did the mouse eat his cheese (up)?’ (van Hout, Schulz & Penner) or ‘In which picture is he eating the cookies (up)?’ (Jeschull 2007b). When children do not distinguish between PVs and

ITVs (Jeschull 2007a), they seem to have problems with the pragmatic implications of scales: they do not compute the scalar implicature (2b) for the ITV (2a) in contexts where adults would:

- (2) a. John ate the cake.  
b. John did not finish the cake./John did not eat all of the cake.

The implicature arises when there is a contrast between a scalar (non-completive) interpretation and an absolute (completive) interpretation as well as a contrast <eat the cake up, eat the cake>, where the use of the weaker ITV conversationally implicates the negation of the stronger PV. When presented with a choice between a completion and a non-completion interpretation as well as an ITV and PV ('Who ate his apples?' vs. 'Who ate his apples up?'), adults correctly compute the scalar implicature, while children have problems with it (Jeschull 2007a).

This analysis is supported by studies on children's acquisition of scalar implicatures, which have consistently shown that children often fail to compute them in contexts where adults would. For example, the implicature arising from the scale <finish,start>, where *Daisy started to color the star* is acceptable if she did not finish it, are particularly problematic for children (Papafragou 2006).

We conclude that children have problems computing the scalar implicature involved in the scalar aspectual interpretation of ITVs, rather than with the semantics of scalarity per se. Children's bias for absolute interpretations explains their early acquisition of absolute aspect entailed by PVs as opposed to their problems with the pragmatics of scalar aspect associated with ITVs. Finally, the acquisition evidence confirms the validity of our claim that telic interpretations may be either absolute or scalar.

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### Modes of coming into being

Verbs of creation come in two main sorts: those that denote the coming into being of the referent of their direct internal argument as a result of the event in question (e.g. *build*) and those that denote the coming into being of an entity that does not surface as an argument to the verb (e.g. *translate*).

Canonically, only verbs belonging to the first group are considered creation verbs. However, this is a restrictive view that fails to capture a number of interesting generalizations about the way creation events are encoded in language, for instance the fact that both the *build*-verbs and the *translate*-verbs may exhibit result nominalizations which are able to refer to the created entity (e.g. *building*, *translation*). Examples of creation verbs of both groups are in (1):

- (1) **verbs of creation:**
  - a. **verbs denoting the coming into being of the referent of their direct internal argument:**  
*built a house, write a book, compile a list, dig a hole, cut a slice, bake a cake*
  - b. **verbs denoting the coming into being of an entity that does not surface as an argument:**  
*translate a book, paint the landscape, photograph a sculpture*

The two classes in (1) may be further subdivided (cf. Bisetto and Melloni 2007). For instance, Piñón 2008 claims that verbs in (1a) fall into three (semantic) subclasses, depending on the semantic character of their direct internal argument: those denoting the creation of a physical object (2a), those denoting the creation of an event (2b) and those denoting the creation of an abstract entity (2c).

- (2) (from Piñón 2008)
  - a. Sarah painted a picture of the Hungarian parliament building
  - b. Sarah sang a sad song
  - c. Rebecca fabricated a story

Verbs of creation pose interesting challenges for event semantics and verb aspectual classification. Though traditionally analyzed as accomplishments, they differ from “regular” accomplishments inasmuch as at the level of Event Structure, the subevent denoting the activity (e1) is co-extensive with the gradual coming into being of the effected object and the temporal extent of the event is delimited by the (state of) existence of the object. In this perspective, creation verbs have been analyzed as incremental theme verbs (cf. Dowty 1991). The analysis proposed here aims at recasting the notion of incrementality associated to events of creation within a scalar approach, following a suggestion in Hale, Kennedy and Levin 1999. In scalar terms, incrementality of creation events may be re-interpreted as the property of the effected object to go through *a gradual progression of states of existence* during the execution sequences of the event, corresponding to *gradual changes in its spatial extent* (cf. also Beavers 2008, who claims that scales corresponding to the extent of entities are appropriate for creation-destruction predicates). In this view, it is this gradable property of the incremental theme, and not the incremental theme itself, that instantiates the homomorphism between the event and the object.

In particular, the analysis proposed attempts a formal modeling of the Event Structure of creation events taking as a starting point the enriched view of Event Structure proposed in Pustejovsky (2000), where it is assumed that creation predicates express the mode of opposition (Opposition Structure, OS) that the object undergoes through the event, namely between /the object not existing/ and /the object existing/. In this view, creation predicates act as *gating functions* over their internal argument and introduce the initiation condition for this argument.

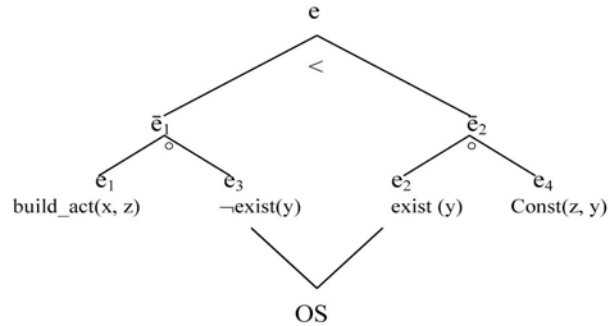


Fig. 1. Enriched ES of build

While the enriched ES in fig. 1 captures the relation between the event and the created object (by introducing reference to the  $\neg$ -existence subevent, corresponding to  $e_3$  in the figure), it still does not capture the incrementality associated to creation verbs, i.e. the (inherently delimited) scalarity of the creation (this problem is tackled in Melloni and Jezek 2009, where a specific formal solution is introduced – that of *subevents co-identification* – to model the incrementality of creation acts).

I propose here to model the gradual progression of states of existence of the argument's referent, corresponding to different degrees in its spatial extent, by integrating intermediate result states (sub-result states) in the enriched ES representation (see Caudal 1999 for a previous treatment of incrementality in a similar spirit – although in Caudal 1999 the notion of incrementality is opposed to the notion of scalarity, instead of integrated in it). Finally, I argue that a richer encoding of the *end result state* is needed to account for the differences in Event Structure between *build*-verbs and *translate*-verbs.

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## Aspectual composition and scalar change

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Current theories of aspect acknowledge the pervasiveness of verbs of variable telicity, and are designed to account both for why these verbs show such variability and for the complex conditions that give rise to telic and atelic interpretations. Previous work has identified several sets of such verbs, including incremental theme verbs, such as *eat* and *destroy*; degree achievements, such as *cool* and *widen*; and (a)telic directed motion verbs, such as *ascend* and *descend*. As the diversity in descriptive labels suggests, most previous work has taken these classes to embody distinct phenomena and to have distinct lexical semantic analyses.

In Kennedy and Levin 2008, we suggest that it is possible to provide a unified analysis in which the behavior of all of these verbs stems from a single shared element of their meanings: a function that measures the degree to which an object changes relative to some scalar dimension over the course of an event. Focusing on the case of degree achievements, we claim that such MEASURE OF CHANGE functions are derived from two more basic concepts: an underlying measure function, which we take to be the basic denotation of expressions that are lexicalized in many languages as gradable adjectives, and a general operation mapping basic measure functions into functions which measure the difference between two objects on a scale, which underlies the semantics of comparatives.

The goal of this talk is twofold. First, I will provide further arguments supporting the link between comparison and scalar change based on cross-linguistic data involving the morphosyntax of change of state verbs and the syntax and semantics of verbal comparatives. Building on these observations, I will then show how the basic account of degree achievements in Kennedy and Levin 2008 can be extended to other verbs of scalar change, in particular the class of ‘incremental theme’ verbs. I will conclude by discussing the implications of the analysis for typological variation in aspectual composition, the structure of the verb phrase, and comparison.

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A long-contested issue has been whether future terms like *will* are modals or simple tenses. Most recently, Kissine (2008) has argued *will* to be a tense. I argue against his analysis and in favor of one which treats predictions as modal expressions. I argue *will* and *be going to* (a similar but semantically distinct term which is often ignored in the literature) are metaphysical necessity modals, but I also propose a novel account of how metaphysical modality is modeled, namely modeling the evaluation world as a “history” or a half-world, extending only up to present time, with the metaphysical modal base consisting of possible continuations of it.

There are two basic options in dealing with futures like *will* and *going to*: a simple tense analysis which says the future is analogous to the past, or a modal analysis (which may or may not also have a temporal component) which says that the future is inherently unsettled or undetermined, meaning that predictive expressions must involve universal quantification over the whole range of open possibilities. I will argue for the latter, which may be called the Branching Time Hypothesis (BTH; Kaufmann 2005).

**Against a Tense Analysis.** Kissine argues that because *will* obeys the Principle of the Excluded Middle, if it is a modal, it must have a singleton modal base, i.e., it must quantify over only one world. Kissine goes on to show that this assumption, together with the assumption that *will* is either a doxastic, epistemic, or metaphysical modal, leads to wrong predictions. However, Kissine’s initial assumption is problematic: there is another analytical option for accounting for the excluded middle in *will* (and *going to*), von Fintel’s (1997) Homogeneity Presupposition, which says that a modal which obeys the Principle of the Excluded Middle presupposes that all the worlds in its modal base are identical with respect to the proposition in question.

Furthermore, a simple tense analysis makes wrong predictions. Observe that the so-called “present tense” in English, which could be better termed “non-past”, can have future temporal reference in some circumstances, but not all.

- (1)
  - a. #It rains tomorrow.
  - b. #I know it rains tomorrow.
  - c. I hope it rains tomorrow.
  - d. If it rains tomorrow, Bill will get wet.

From (1) we can see that the simple present on a future reading is infelicitous in unembedded or epistemic modal contexts, but acceptable in other modal contexts. There is no such restriction on the future temporal reference of *will* or *going to*.

- (2) It {will/is gonna} rain tomorrow.

The split in (1) is predicted by the BTH since the unknowability of the future precludes direct or epistemic claims about it. But modalized claims about the future are permitted; the future of idealized worlds, (1c), hypothetical worlds, (1d), or of the metaphysically possible worlds, (2), can be referred to. A tense-based analysis would have a difficult time differentiating the behavior of the non-past tense and *will/going to*.

**Diagnosing Modality.** Although a tense-based analysis is shown to be difficult to maintain, a more direct diagnostic for modality needs to be given. I propose that conditionals provide just such a diagnostic. Following Kratzer (1986), I take *if*-clauses in conditionals to be restrictors in

(3) a. If he turns red, he's angry. (causal - # ; indicational - ok)  
b. If he throws a tantrum, he has to go to bed. (causal - ok ; indicational - ok)

(4) If you tip the baby over, she {will/is gonna} cry. (Copley 2002)

(5) a. He's smart. He must {have done/be doing} well on his test yesterday.  
b. He's smart. # He must do well on his test tomorrow.

This also resolves a problem arises from the formulation of the metaphysical modal base in previous analyses (e.g., Kaufmann 2005). In such analyses the metaphysical modal base is reflexive, meaning the world of evaluation is necessarily included in the domain of quantification. This means the proposition under question will be predicated of the world of evaluation, which is a violation of the BTH proposal against reference to the future of the evaluation world, which is by hypothesis unknowable. If the evaluation world is only a history, it is excluded from the metaphysical modal base, which is only the set of futures which are possible continuations of it. The BTH is therefore preserved.

# Surface Constraints on Multiple Default Morphemes of Tense

Hiroki Koga<sup>1</sup> and Koji Ono<sup>2</sup>

The current paper proposes an optimality-theoretic alternative to the conventional assumptions of the ‘non-past’ tense morpheme and the verb base forms of Japanese, that explains dialectal differences, performing a division of labor among linguistic components.

**Literature review:** The conventional assumptions for the standard, as assumed in, for example, Hayata (1998:32), Shirota (1998:23), if extended to Yamaguchi dialect, would need to assume that each ‘/n/ consonant-final’ weak base verb has two base forms, 1) consonant-final one as usual since they pattern the same as the consonant-final base verbs when they are in the negative, present participle and passive forms, e.g., (1b-ii) the same as in (1a-ii), and 2) the other with the vowel /u/ added at the final of the usual one since they pattern the same as the strong base verbs #ku+ru# ‘come Non-past’ and #su+ru# ‘do Non-past’ when they are in the ‘non-past’ and /(r)eba/-conditional forms, e.g., in (1b-i) in contrast with its standard counterpart (1a-i).

- |     |    |  |              |                     |
|-----|----|--|--------------|---------------------|
| (1) | a. | i) sin u                                 | ii) sin anai | [Standard Japanese] |
|     |    | die Non-past                             | die not      |                     |
|     | b. | i) sinu ru                               | ii) sin an   | [Yamaguchi dialect] |
|     |    | die Non-past                             | die not      |                     |
|     |    | ‘i) (He) dies.’ ‘ii) (He) does not die.’ |              |                     |

All the ‘/n/ consonant-final base’ verbs are only /sin/ ‘die’ and /in/ ‘leave’ in the dialect. It would be simpler if we could avoid this dialectal different assumptions of the base forms of the /n/ consonant-final base verbs.

**Proposal:** The alternative to propose, further analyzes Kasuga’s (1973:129) ‘non-past’ morpheme /uru/ as a complex consisting of two default morphemes of tense (DftMTs) /u/ and /ru/, as formalized as  $[DftMT [DftMT X][DftMT Y]]$ . The analysis of the content of the default morpheme of tense as the identity function, formalized as **DftMT**’ =  $\lambda X \lambda e \lambda t [X(e)(t)]$ , makes this reiteration possible. The content of the complex #u+ru# is thus computed as  $\lambda X \lambda e \lambda t [X(e)(t)] (\lambda X \lambda e \lambda t [X(e)(t)]) = \lambda X \lambda e \lambda t [X(e)(t)]$ .

An extension of Ito 1990 as a surface constraint that **the prosodic structure of the finite form of every verb consists of more than one syllable** in conjunction with the independently motivated final /u/ absence immediately after the dental nasal in Yamaguchi dialect, built on our tense analysis, does not permit the /n/ consonant-final base verbs with its ‘non-past’ tense morpheme only /u/, #sin+u# (1a-i) and #in+u# ‘leave Non-past’ in the dialect. This is because the former would realize as [sɪn] and the latter as [ɪn] eventually, and their prosodic structures would consist only of one syllable, violating the minimality constraint.

It will be correctly predicted that #sin+u+ru# (1b-i), for example, is optimal in the dialect, #sin+u# (1a-ii) being ungrammatical, (whereas #sin+u# (1a-ii) is optimal in the standard), if an economy surface constraint is assumed that **no morpheme is repeated if not necessary, and a morpheme may be repeated if necessary**. The tense of the content of a verb with the default morpheme of tense will be specified as the ‘non-past’ tense if the ‘non-past’ tense, which is formalized as  $\lambda X \lambda e \lambda t [X(e)(t) \ \& \ t \in T_{NON-PAST}]$  (which uses Parsons’ (1985: 244) analysis of a tense morpheme), is free,

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which is independently motivated, for example, for ‘copula-less’ sentences. For example, #sin+u+ru# (1b-i) is correctly predicted to be interpreted as meaning  $\lambda X \lambda e \lambda t [X(e)(t) \ \& \ t \in T_{NON-PAST}] (\lambda X \lambda e \lambda t [X(e)(t)] (\lambda e \lambda t [die'(e) \ \& \ Cul/Hold(e)(t)]))$ , equivalently  $\lambda e \lambda t [sleep'(e) \ \& \ Cul/Hold(e)(t) \ \& \ t \in T_{NON-PAST}]$ . The analysis of the default morpheme of tense in conjunction with the economy constraint and the prosodic minimality constraint also immediately explains the ‘non-past’ complex /uru/ with the strong base verbs /k/ ‘come’ and /s/ ‘do’ since they consist only of one consonant, but the ‘non-past’ simple morpheme /u/ or /ru/ with the weak base verbs in the standard Japanese (1a) since there is no weak base verb the base form of which consists only of one consonant.

Steriade’s (2008: 336) global correspondence, which states ‘**[g]iven a subconstituent C of a candidate expression characterized by a set of syntactic specifications  $\{[\alpha \text{ F}], [\beta \text{ G}] \dots, [\gamma \text{ H}]\}$ , C stands in correspondence to that one of its listed allomorphs that is characterized by the same set of syntactic values**’, if assumed **within each morphological class**, explains the ‘non-past’ complex /uru/ for the /e/ vowel-final base verbs with the last /e/ absent in Yanagawa dialect, as in (2-i) and (2-ii).

- (2) i) tab u                      ru                      ii) n                      u                      ru                      [Yanagawa dialect]  
          eat Non-past Non-past                      sleep Non-past Non-past  
          ‘i) (He) eats (it).’    ‘ii) (He) sleeps.’

The surface constraint selects the complex #u+ru# as the default morpheme of tense standing in correspondence within the morphological verb class. Had it selected the simple /u/ instead, since there is at least one /e/ vowel-final base verb with the last /e/ absent that consists only of one consonant /n/ ‘sleep’, the ‘non-past’ form #n+u# ‘sleep Non-past’ would have violated the prosodic minimality constraint. The current study implies that the default morpheme of tense with the content of the identity function is in Japanese, whereas there is no present tense in English (Enç 1997:347).

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# Weak and Strong Anankastic Modals

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## 1. Introduction

Strong and weak goal-oriented necessity modals, dubbed universal anankastics in the recent literature, are morphologically related to each other in many languages, cf. von Fintel and Iatridou (2008). Weak anankastics are often formed from strong ones with the help of counterfactual marking, cf. the Russian pair in (1). Semantically, the two varieties of universal anankastics (henceforth WA and SA) differ in a number of respects: WA are characterised by relatively weaker modal force, cf. (2); in contrast to SA, WA never scope under negation or exclusive operators like ‘only’, cf. (3); only SA trigger sufficiency reading in scalar contexts, cf. (4). The morphological link between WA and SA, their scope properties and the distinct patterns in scalar contexts call for an explanation.

- (1) Тебе надо / надо бы туда пойти.  
you necessary / necessary SUBJ there go  
‘You have to / ought to go there.’
- (2) a. ?Тебе надо туда пойти, но нет необходимости.  
you- DAT necessary there go but NEG necessity  
‘?You have to go there, but you don’t have to.’  
b. Тебе бы надо туда пойти, но нет необходимости.  
you- DAT SUBJ necessary there go but NEG necessity  
‘You ought to go there, but you don’t have to’
- (3) a. You ought not to leave. *vs.* You do not have to leave.  
b. You ought only to go there. *vs.* You only have to go there.
- (4) a. You attended more courses than you had to (to pass the test).  
⇒ You could have attended less courses.  
⇒ You should have attended less courses.  
b. You attended more courses than you should have (to pass the test).  
⇒ You could have attended less courses.  
⇒ You should have attended less courses.

## 2. SA as Counterfactuals Restricted by Contextual Alternatives

Following von Stechow et al. (2006), we assume that universal anankastics involve the same kind of accessibility that is used for counterfactual conditionals by Lewis (1973), viz. the similarity ordering, see (5). We propose that comparison with the negation of the consequent is a special case of comparison with the contextually salient alternatives to the consequent, as argued in Villalta (2008) for desire reports. (6b) is a reformulation of (5) in terms of Lewis’ comparative possibility order on propositions given in (6a); (6c) generalises the negation of *C* to the contextual alternatives to *C*. The value of *C* is determined by the focus structure of the complement, in analogy to the treatment of ‘always’ in Beaver and Clark (2003).

- (5) ‘You have to *C* in order to *A*’ is true in *w* iff  
Some accessible *A* and *C*-world is closer to *w* than any *A* and non *C*-world
- (6) a. For any propositions *p* and *q*: *p* is more possible in *w* than *q*  
iff some *p*-world is closer to *w* than any *q*-world  
b. *A* and *C* is more possible in *w* than *A* and not *C*  
c. For any alternative *X*: (*A* and *C*) is more possible in *w* than (*A* and *X*)

### 3. Two Layers of Modality in WA

To capture the apparent weakening of modal force in WA, we propose to treat them as involving two layers of modality. English ‘ought to’ is analysed as a bouletic modal stacked on a covert SA (SHOULD). The presence of SHOULD is reflected in the counterfactual morphology in ‘transparent’ languages, like Russian. The outer bouletic modal restricts the worlds selected on the basis of the similarity ordering used by the lower SA to those in which some wishes, preferences or recommendations hold, cf. (7). Consequently, SA statements, unlike WA ones, survive vF&I’s contradiction test in (2): the two clauses of (2b) involve universal quantification over different sets of worlds. In the same vein, our analysis explains why in the pair in (8) (from Sloman (1970)) the SA variant expresses the only means of achieving a goal, whereas the WA variant talks about the best one: going by train is a necessary condition with ‘have to’ and a necessary condition in view of somebody’s preferences with ‘ought to.’

- (7) ‘You ought to *C* in order to *A*’

For any alternative *X*: (*A* and *C*) is more possible in *w'* than (*A* and *X*), for any *w'* compatible with what is desired/recommended/preferred in *w*

- (8) If you want to get to London by noon, then you ought to / have to go by train.

### 4. Scalar Contexts

Sufficiency reading is the result of a realistic ordering employed by SA. The fact that one picks the easiest means of achieving a goal renders some alternatives to the complement of the modal more remote. Consider (4a). In view of what the case is, that you attend less or more courses than sufficient and pass the test is not a better possibility than that you attend the minimally required number of courses and pass. Consequently, the embedded clause, viz. (9), refers to the minimally required degree and we obtain a more-than-min reading. In (4b) it is not facts but someone’s wishes that are taken into account for the evaluation of the embedded modal statement. The sufficiency reading is ruled out.

- (9)  $\iota(\lambda d [\text{have to}_C [\text{you pass the test}]] [\text{you attend } d \text{ many courses}])$

$g(C) = \{p: p = \lambda w \text{ you attend } d' \text{ many courses in } w \wedge d' \neq d\}$

### 5. Negation

Negating a WA statement results in truth conditions that can never be met under the assumption that deontic/bouletic worlds used as an ideal in a WA sentence are assigned the same degree on the similarity scale. This accounts for the obligatory high scope of WA.

### 6. Conclusion

The weakening effect and the lack of sufficiency reading in WA is due to the presence of two layers of modality: a higher overt bouletic and a lower covert counterfactual modal.

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## When desiderative exclamations meet the conditionals: The case of Greek

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I focus on a particular type of exclamations that is not paid much attention in the literature. Focusing on Greek, these exclamations denote both a CF-wish and a condition. The conditional formed is *na p*, *na q*, with *na* being a subjunctive marker:

- (1) (Makári) Na ímun plúsios, na taksíðeva s'ólon ton kósmo!  
Excl.prt. NA be.1imp. rich, NA travel.1imp. in-all the world  
If only I were rich, I could/might travel around the world!

My purpose is to examine these constructions and offer a possible analysis that accounts for their force, modality, and conditionality.

In their previous work on exclamations and in particular on wh-exclamations, Portner and Zanuttini (2003) argue that there are two factors that identify exclamations: (i) they are factive, i.e. they contain an abstract F morpheme in the CP domain; (ii) they can be introduced by a wh-operator. In *na p*, *na q* the exclamation is localized within *na p*. Similar to wh-exclamations, *na p* is also factive, but crucially, the presupposition stems from the negation of the propositional content (i.e. in ex. (1) *the speaker is not rich*). Furthermore, there can be a particular element spelling out the exclamative force, such as the exclamatory wish particle *makári* in ex. (1). Therefore, with *na p* we have a CP-exclamation with a non-abstract head.

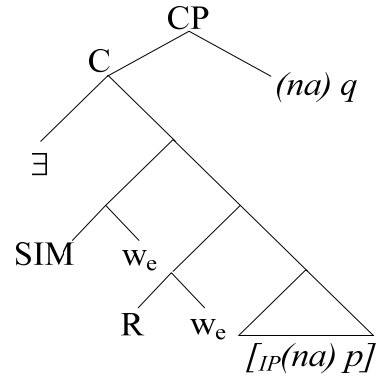
Interestingly, *na p*, *na q* seems to be analogous to the English *if only p*, *q*. In addition to the wish denoted, both *na p* and *if only p* form the antecedents of a conditional. However, unlike Rifkin (2000) shows for *if only p*, the exclamatory wish *na p* cannot be embedded. As Portner and Zanuttini also suggest, exclamations are restricted that way. That is, the impossibility to embed *na p* is due to selectional restrictions of a higher verb. Finally, regarding the consequent *na q*, it is shown that this can only be interpreted existentially, denoting a possibility or an ability.

Turning to the proposed derivation, I assume that *na p*, *na q* is primarily a conditional. The exclamatory wish interpretation is not obligatory on *na p*, while the conditionality is always present in this construction. It makes sense to conclude then that *na p*, *na q* should have the typical conditional structure proposed by Kratzer (1986). Similar to an *if-clause*, *na p* is located in the restriction of the modal operator. This operator is an existential ability or possibility operator (see tree in figure [1]). The consequent *na q* on the other hand, is located in the nuclear scope of this operator. With respect to the particle *na* itself, it is argued that its sole function is to introduce a (semantically) embedded proposition. Parallel to Portner and Zanuttini's analysis (2003), a higher CP is merged next (CP1 in figure [2]). The head of this CP is filled by a universal operator, often spelled out as an exclamatory wish particle. Next, *na p* moves to the higher CP, as the semantic argument of the universal wish operator. Finally, adopting Heim's definition (1992) for the wish operator, and similar to the analysis suggested for modal verbs (Kratzer, 1991), I suggest that the wish-operator first operates on its restriction and then takes a full sentence as its semantic argument. This assumption derives the wish-meaning of *na p*.

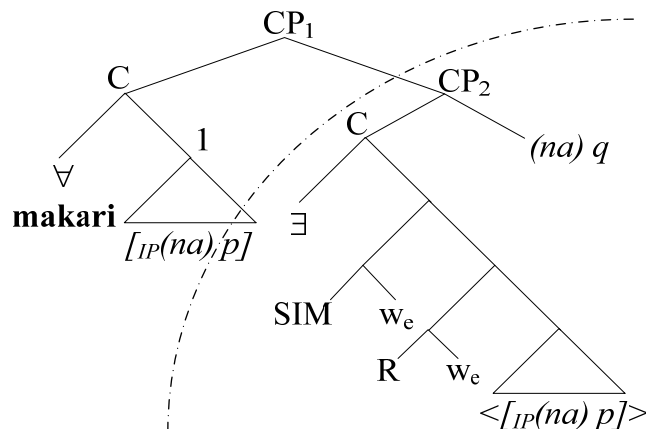
In all, under this analysis the complex properties of *na p*, *na q* now easily follow. Moreover, similar constructions are attested cross-linguistically (e.g. in most Indo-European languages). Some seem possible to embed, while others show a clear preference to precede everything else in the structure. Crucially, the distinguishing property may be that of the exclamation.

## STRUCTURES

[1] The conditional *na p, na q*



[2] The structure of *na p, na q*



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*Devoir, sollen, be to* : les emplois temporels de la modalité de nécessité

Cet article cherche à comparer l'utilisation d'expressions modales exprimant la nécessité dans des emplois proches de la temporalité dans trois langues.

On distingue généralement deux emplois du verbe modal *devoir* du français : un emploi radical exprimant l'obligation et un emploi épistémique de forte probabilité. Kronning (1996) et Vetters & Barbet (2006) notent l'existence d'emplois plus difficiles à classer. C'est le cas selon eux de la « prophétie rétrospective » :

- (1.) *Ces menues victoires m'encouragèrent à ne pas considérer comme insurmontables les règles, les rites, la routine; elles sont à la racine d'un certain optimisme qui **devait survivre** à tous les dressages.* (S. de Beauvoir, *Mémoires d'une jeune fille rangée*, 1958)

et de la prévision d'un événement à venir :

- (2.) *Jacques Chirac **doit rencontrer** Tony Blair demain soir.* (cité par Vetters & Barbet 2006).

Dans ces énoncés, *devoir* fonctionne pour eux comme auxiliaire du futur et non plus comme verbe modal. Il nous semble que la prévision dans le passé relève également de ces emplois « inclassables » à valeur temporelle :

- (3.) *la nacelle et ses accessoires, les ancres, les cordes, les vivres, les caisses à eau que l'on **devait remplir** à l'arrivée, tout fut arrimé sous les yeux de Fergusson.* (J. Verne, *Cinq semaines en ballon*, 1863).

On retrouve une hypothèse assez similaire chez Rivière (1984), qui affirme que *devoir* exprime alors un « simple futur », la « constatation d'un plan préarrangé ». Rivière ajoute d'ailleurs à la liste des emplois « temporels » de *devoir* l'éventualité dans les subordonnées hypothétiques, soit à l'imparfait :

- (4.) *Le docteur recommençait à s'inquiéter : si le voyage **devait ainsi se prolonger**, les vivres seraient insuffisants.* (J. Verne, *Cinq semaines en ballon*, 1863).

soit au présent :

- (5.) *Eric me demande de retirer son nom de ce texte **s'il doit « porter atteinte »** à sa vie privée. Je lui réponds « t'en fais pas, j'ai tout coupé. Il n'y a plus ton nom. Il n'y a plus aucun nom. [...] ».* (Frantext, Y. Navarre, *Biographie*, 1981, p. 115).

On sait que la modalité est l'un des outils qui servent à former des futurs périphrastiques (Bybee *et al.* 1994). On peut donc se demander si ces emplois témoignent d'un début de grammaticalisation de *devoir* comme auxiliaire du futur. Brunot (1965) considérait déjà *devoir* + inf. comme « une périphrase de futur en formation », qui sert notamment lorsque le futur est impossible (par exemple dans les subordonnées hypothétiques).

Bien que la nécessité s'exprime de façon différente en anglais et en allemand, elle a donné lieu à des emplois similaires. L'allemand possède un verbe modal *sollen* – apparenté à *shall* – plus précis que *devoir* : lorsqu'il n'est pas employé en modalité épistémique, il ne peut exprimer que la nécessité résultant d'une volonté (celle du locuteur ou celle d'un tiers) et s'oppose à *müssen*, exprimant une nécessité moins restrictive. L'anglais pour sa part possède à côté de *must* et de *have to* la construction *be to*, qui n'est pas fondée sur un verbe exprimant le devoir ou la nécessité, mais qui est considérée comme expression modale (« modal idiom » d'après la grammaire de Quirk *et al.* (1985 : 218)).

*Müssen* en allemand et *must* en anglais n'ont pas développé d'emplois temporels. En revanche, *sollen* et *be to* s'emploient tous deux au prétérit pour la prophétie rétrospective, comme le note Jespersen (1965) en comparaison avec le français et le danois :

(6.) *Next year she gave birth to a son who **was to cause** her great anxiety.*

(7.) *Im nächsten Jahr gebar sie einen Sohn, der ihr große Bekümmernis verursachen **sollte**.*

Cet emploi est généralement considéré comme temporel et non modal en allemand, avec une nuance de prédestination (Duden §173, Milan 1995). De fait, il dépasse la simple modalité puisqu'il implique, comme un temps, la réalisation du procès (Thieroff 1992 :159, Raynaud 1976 : 65). *Be to* est également utilisé, comme *devoir*, pour exprimer une prévision (« arrangement ») ou un plan concernant l'avenir (Quirk *et al.* 1985 : 218). Quant à *sollen*, il possédait cet emploi avant la périphrase actuelle de futur, *werden* + inf., et l'a gardé jusqu'à aujourd'hui :

(8.) *ich **sol** iu immer dienen, alsô sprach der degen* . (*Das Nibelungenlied*, 304, cité par Kotin 2003 : 167)

*Je vous servirai toujours, dit le chevalier. (litt. je dois vous servir toujours)*

Sur la base d'une étude de corpus, nous chercherons à savoir

1) Dans quelle mesure ces emplois peuvent être considérés comme de véritables emplois temporels. En effet, les expressions modales sont dans ces trois situations en concurrence avec des futurs ou des futurs du passé (conditionnel, *würde* + inf., *would* + inf.).

2) Si ces emplois sont aussi développés dans les trois langues. Il apparaît, dans notre corpus, que la prophétie rétrospective est davantage utilisée en français que dans les deux autres langues, qu'elle s'exprime à l'aide de *devoir* ou de simples futurs ou futurs du passé. En revanche, *sollen* est beaucoup plus employé que ses homologues français et anglais pour exprimer la prévision. Milan (1995) note aussi qu'il ne peut toujours se traduire par *dovere* en italien. Nous chercherons à préciser les critères d'emplois pour les trois langues.

3) Si l'emploi de *devoir* et de ses équivalents en subordonnée hypothétique peut être considéré comme un emploi temporel. En allemand, *sollen* au subjonctif 2 est employé aussi lorsque l'éventualité concerne un fait présent ou passé, ce qui ne semble pas être le cas en français.

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## The status of Tense in Ojibwe

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This paper looks at the status of Tense as a functional head in Ojibwe, a Central Algonquian language, in light of contrasting behaviour found in related Blackfoot, as well as in Halkomelem Salish. Wiltschko (2003) has argued that Halkomelem Salish (HS) lacks a functional head encoding tense, and that Infl is instead centered on Location (Wiltschko & Ritter 2004, 2007). This view is challenged by Matthewson (2005) who claims that Salish languages have a tense system that is fundamentally similar to that of English, but is not always phonologically realized. Further, Ritter & Wiltschko (2004, 2007) argue that tense in Blackfoot (Plains Algonquian) is not a functional head but is expressed instead by adverbial elements, and that Infl actually encodes Person rather than Tense.

We argue that not all Algonquian languages are alike in the way they encode tense grammatically. Unlike Blackfoot and HS, we claim that Infl in Ojibwe is in fact Tense and that temporal relations are not purely adverbial in this language. Several arguments support this claim, first that Tense markers on the verb are obligatory and not optional. In HS (Wiltschko 2003), the sentence in (1) lacks an overt tense marker but can be interpreted as past, present or future. The situation in Blackfoot (Wiltschko & Ritter 2004) allows for similar freedom – (2)a can be interpreted as either past or present while (2)b as either past or future. Ojibwe does not allow tense markers to be optional, illustrated in (3) which cannot be interpreted as past or future in the absence of a tense marker (e.g. *gii-* ‘past’, *ga-* ‘future’), but only as present tense (which is phonologically unmarked). The temporal meaning of the sentence is fixed by the tense marking.

The second argument for functional Tense in Ojibwe is that tense markers are in complementary distribution, and therefore occupy a fixed position. This type of behaviour should not co-occur with adjuncts like adverbs, which are able to attach at different sites and be stacked. According to Wiltschko (2003), past and future tense markers in HS can be stacked: both the past tense marker *lh-* and the future tense marker *-cha* can appear within the same clause, as shown in (4). Also in (4) it is clear that the morphemes associated with tense interpretation do not occupy a fixed position since they can be prefixes or suffixes. In Ojibwe, the tense morphemes (past, present and future) are prefixed to the verb in the same slot and multiple tense prefixes are not possible, further indicating their functional status.

Third, tense markers in Ojibwe can appear with verbs to the exclusion of other categories (with one exception, see below). In Halkomelem Salish, tense morphemes can, according to Wiltschko (2003), appear on a variety of categories, including nominals as shown in (5), which renders a ‘late/deceased’ interpretation (see also Demirdache 1997, 1998 for Lillooet Salish and Lecarme 1996, 1998, 2004 for Somali, but see Matthewson 2005 for different views on tense appearing on nominals). In Ojibwe, the only environment where past tense morphology is tolerated apart from verbal contexts is on nouns (6), expressing that a relationship is no longer in effect. The same ending, *-iban*, is found in the preterit verbal mode, and appears to be a kind of aspectual suffix rather than a pure instance of Tense.

Finally, tense prefixes in Ojibwe can bear what we claim is wh-agreement, found in clauses where wh-operator movement has occurred. This argues for Tense as a functional head since agreement is not expected to appear on adverbial elements as it does on functional ones. To illustrate this wh-agreement, consider (7) where the form of a tense prefix in Ojibwe changes when wh-movement occurs. In (7)a *gii-* indicates ‘past’ in the declarative, but the tense prefix is changed to *gaa-* ‘wh.past’ in (7)b when the subject (or any other element) is questioned. This phenomenon has been labeled *initial change* in the traditional literature (Bloomfield 1957), but we argue it is in fact wh-agreement in Ojibwe, since it directly correlates with wh-movement, relative clauses (8), certain focus constructions (9) and past participles (10) – all involving wh-operators. This agreement is obligatory, and every clause through which a wh-element has moved



is marked with the agreement (11). Further, we claim that wh-agreement features, which originate on C, appear on Tense via feature inheritance (see Chomsky 2008; Richards 2007). This extends the scope of feature inheritance to transferring discourse-features (like [wh-]) as well as phi-features (Chomsky 2008).

If, as argued by Ritter & Wiltschko (2004, 2007), Blackfoot is like HS in lacking functional tense, then Blackfoot must be very different from Ojibwe where tense is clearly a functional head. The differences go even deeper, while Halkomelem Salish and Blackfoot appear to lack infinitives, copulae, expletives, tense dependencies, case and possibly A-movement of any kind, the situation in Ojibwe can be quite different. Although Ojibwe appears to lack infinitives and expletives, it does, however, have a verb that corresponds to a copula, namely the animate intransitive final *-i*, as in *ikwew-i* ‘be a woman’. Interestingly, there are also differences between Blackfoot and Ojibwe in the way initial change is realized (Frantz 1991:36, see also Cook 2008 for discrepancies between Blackfoot and other Algonquian languages). Ojibwe Tense, therefore, behaves as a functional category, rather than as an adverbial element and bears wh-agreement, indicating a sharp contrast from the view of tense in Blackfoot and Halkomelem Salish.

- (1) tsel í:mex  
1sg.s walking  
‘I am/was/will be walking.’ (Wiltschko 2003:687)
- (2) a. Kit-ána aasá’ni-wa 2-daughter cry-3sg  
i) ‘Your daughter cried’ (cf. Frantz 1991:36(v))  
ii) ‘Your daughter is crying.’ (Wiltschko & Ritter 2004)  
b. Nit-sspiy-ihpinnaan 1-dance-1pl  
i) ‘We danced.’ (cf. Frantz 1991:36(x))  
ii) ‘We are going to dance.’
- (3) Nenabozh niimi’iwe.  
Nenabozh give.dance  
(i) ‘Nenabush gives a dance.’ (Bloomfield & Nichols 1991:18)  
(ii) \*‘Nenabush gave a dance.’ (iii) \*‘Nenabush will give a dance.’
- (4) í-lh-tsel-cha ímex.  
aux-past-1sg.s-fut walk  
‘I was going to walk.’ (Wiltschko 2003:686)  
(5) ímex te-l si:lá-lh  
walk det-1sg.poss grandfather-past  
‘My late grandfather walked.’ (Burton 1997:73)
- (6) a. nmishoos-iban b. nimashkimod-iban  
‘My late grandfather’ ‘the bag I used to have’ (Nichols, Price & Lickers 2002:26)
- (7) a. Mani w-gii-shishimikkwezhigaans-an Mary 3-pst-steal cookie-pl  
‘Mary stole the cookies.’  
b. wegenesh<sub>i</sub> t<sub>i</sub> gaa-shishimik nen kwezhigaans-an? who wh.pst-steal those cookie-pl  
‘Who stole the cookies?’
- (8) Mii wa nini [ dakweman gaa-bkinaagen’jin mbingoo.]  
it’s that man poss.wife wh.pst-win bingo  
‘That’s the man whose wife won at bingo.’ (Valentine 2001:585)
- (9) niizhwaak dso-bboon gaa-ko-zhiweebak maanda  
two hundred years wh.pst-formerly-happen this  
‘It was two hundred years ago that this happened.’ (Rogers 1978:170)
- (10) gaa-miinaas-wangdwaa-nin wh.pst-evid.neglected.to.give-3pl  
‘What we evidently neglected to give to them.’ (Rogers 1978:173)  
(11) wegenesh<sub>i</sub> Mani gaa-waabm-a-t [t<sub>i</sub> John gaa-giinonad t<sub>i</sub>]?  
who Mary wh.pst-see-D-OBV John wh.pst-talk  
‘Who did Mary see John talking to?’

## The Embedded Present in Romanian: An Issue of (Non)Commitment

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**Issue.** One typological distinction between languages concerns the way in which they convey temporal overlap between the matrix and the subordinate eventualities. Some languages—the so-called Sequence of Tense (SOT) languages—are able to use an imperfective *past* to convey temporal overlap, others do not. In this talk, I discuss the ability of Romanian *present* to receive a simultaneous (SIM) construal. It seems that the SIM construal of present situates Romanian midway between English (an SOT language) and Russian (a non-SOT language).

- (1) a. *va crede că cineva îi citește scrisorile.*  
 aux.**PRES**.3sg think that someone CL.3sg. read.**PRES** letters      b. *Voi fotografia o pereche care dansează vals.*  
 aux.**PRES**.1sg p-graph a couple who dance.**PRES** waltz
- (2) a. *Alex mi-a spus că Alina este însărcinată.*  
 Alex me has told that Alina be.**PRES** pregnant.      b. *Alex a vorbit cu băiatul care plânge.*  
 Alex has talked to the boy who cry.**PRES**.

I show that in *present under future* configurations, Romanian patterns with English—i.e., it allows a SIM construal in both complement clauses (CCs) and relative clauses (RCs) such as (1a-b) where the letter-reading/dancing is understood as co-temporal with the thinking/photographing. In *present under past* configurations it tends to pattern with Russian—i.e., it can be simultaneous in CCs, such as (2a) where the pregnancy can be understood as co-temporal with the saying-time, and indexical in RCs, such as (2b) where the boy's crying must overlap the utterance-time (UT-T). **Accounts of (embedded) present.** There are two major accounts of SIM present in embedded contexts. The first account (the 'vacuous tense' account, Ogihara, 1996, Kratzer, 1998, a.o) posits that in some languages, a present tense that would otherwise be interpreted as indexical is optionally deleted when c-commanded by another present, and tense deletion gives rise to a SIM construal. The second account, which I call the 'indexical' account, (Schlenker, 2003) assumes that present is always indexical and the SIM construal results from its ability to shift in certain environments (under attitude verbs which act as quantifiers over contexts of speech). However, both accounts suffer from shortcomings when it comes to accommodating cross-linguistic data. The 'vacuous tense' account cannot explain why, given its optionality, in certain contexts (i.e. in sentences such as 'John will buy a fish that is alive'), the tense deletion rule is apparently *enforced*. Also, this account cannot explain the asymmetry between Russian CCs and RCs. The indexical account, on the other hand, cannot explain why Russian and Japanese—both non-SOT languages—behave differently with respect to the interpretation of present under past in RCs: in Japanese, present under past expresses temporal overlap between the matrix and the embedded eventualities, whereas in Russian, present forces the embedded eventuality to overlap the UT-T (whether or not it also stretches in the past so as to include the matrix event-time). **A further puzzle: Romanian present in complements of past tense verbs.** For some Romanian speakers, present under past in CCs conveys a SIM meaning only when it occurs under *certain* attitude verbs.

| Table 1. <b>Simultaneous</b> present in Romanian | <i>spune</i> 'say'/'tell' | <i>ști</i> 'know' | <i>crede</i> 'believe' |
|--|---------------------------|-------------------|------------------------|
| Group A Speakers                                 | ✓                         | ✓                 | ✓                      |
| Group B Speakers                                 | ✓ #                       | #                 | ✓                      |

As Table 1 shows, there seems to be variation among speakers with respect to the SIM construal of present: Group A's speakers allow the SIM present under the three kinds of verbs tested, whereas Group B's speakers systematically allow it only under 'believe'. For these speakers, SIM present is infelicitous under 'know' and under 'say' (in cases which I will consider below): present implies that the embedded state holds at UT-T (more precisely, it yields a so-called *double access* reading). In sum, present under past in Romanian can be SIM, but in a more restricted set of contexts than in Russian.

**Proposal.** Assuming that SIM present is a shifted indexical, we cannot explain why Group B's speakers accept the SIM present under 'believe' but reject it under 'know' and 'tell'. The

‘indexical’ account cannot thus do justice to these speakers’ intuitions. I propose instead that Romanian present is the morphological realization of two distinct entities: an indexical tense (PRES<sub>IND</sub>) and a zero tense (PRES<sub>Ø</sub>, in the sense of Kratzer, 1998) which is responsible for the SIM readings. For Group B’s speakers the occurrence of these items depends on the speaker’s commitment to the truth of the embedded clause—PRES<sub>IND</sub> is restricted to contexts where the speaker is committed to the truth of the embedded clause. In contexts that do not involve the speaker’s commitment to the content of the reported speech either PRES<sub>Ø</sub> or PRES<sub>IND</sub> can be used. This approach captures well the above-mentioned variation. Factive verbs like *ști* ‘know’ presuppose the truth of the embedded clause. The speaker is thus committed to the truth of the embedded clause, which means that only PRES<sub>IND</sub> is available. *Crede* ‘believe’ does not involve commitment on the part of the speaker, and so, both PRES<sub>Ø</sub> and PRES<sub>IND</sub> are available. With *spune* ‘say/tell’, a different pattern emerges. On the one hand, *spune* patterns with *crede* in a situation where the speaker does not know whether the embedded clause is true or not ((3a)) or when the speaker knows that the embedded clause is false ((3b)). Both of these cases establish the speaker’s non-commitment. On the other hand, *spune* may behave like a factive verb when the speaker considers herself to have evidence for the truth of the CC, as in (4a), uttered by someone who takes Anca to be reliable about the local weather. In this case, *only* PRES<sub>IND</sub> is an option, as the infelicity of (4b) shows. Here, the speaker not only reports what Anca told her but also assumes what is asserted in the embedded clause. Present in this context could only be the realization of PRES<sub>IND</sub>, but the presence of “two years ago” makes the sentence pragmatically odd.

(3)a. **Context A.** “I have no idea whether or not Mirela was ever pregnant.”

b. **Context B.** “I know as a matter of fact that Mirela was never pregnant. I was there when the doctor told her that she cannot have children”.

c. **Acum zece ani**, Mircea mi-a spus că Mirela așteaptă un copil.

present

Ten years ago, Mircea me has told that Mirela expect.PRES a baby

(4)a. **Context: Two years ago**, I spoke with Anca on the phone. She was in Seattle. Anca: “It is raining.”

b. **Acum doi ani**, Anca mi-a spus că plouă în Seattle.

#present

Two years ago Anca me has told that rain.PRES in Seattle

This approach suggests an explanation for the difference between the construal of present in CCs vs. RCs under a matrix past. RCs, unlike CCs, are not attitude contexts. The issue of whether the speaker is committed to the truth of the embedded clause does not arise. This has the result that PRES<sub>Ø</sub> no longer becomes an option. When present is used, it can only be a PRES<sub>IND</sub>—that is why a sentence with a present in a RC embedded under a past can only be used in a situation where the embedded eventuality overlaps the UT-T. To express a purely SIM reading, an imperfective past is required. **Extension.** This analysis can be extended to future. Romanian future can be decomposed into PRES<sub>IND</sub> / PRES<sub>Ø</sub> + the tenseless form WOLL (Abusch, 1988) + the infinitive of the verb. I surmise that PRES<sub>Ø</sub> + WOLL is the equivalent of *would*, whereas PRES<sub>IND</sub> + WOLL corresponds to either *would* or *will*.

(5)a. **Acum 2 săptămâni**, Vlad a spus că 10 zile mai târziu îi va spune Mirelei că prăjitura e delicioasă

2 weeks ago, Vlad has said that in 10 days CL.3sg. aux.PRES.3sg. tell M. that the cake be.PRES delicious

b. **2 WEEKS AGO** **10 DAYS LATER** **UT-T**

—[—|—|—]—[—[TELLING]—]—|—>  
SAYING BE DELICIOUS

[PAST [CP1 PRES<sub>1</sub> + WOLL tell [CP2 PRES<sub>2</sub> be delicious ]]]  
PRES 1 PRES 2

In (5a), the *telling* event follows Vlad’s saying-time but precedes the UT-T, and the speaker does not commit herself to the truth of CP1. The semantic future on *spune* ‘tell’ has a PRES<sub>Ø</sub> component (PRES1). The state in CP2 is understood as co-temporal not with the UT-T but with Vlad’s future *telling* event which is in the *past* with respect to the UT-T. The most embedded present (PRES 2) thus does not have an indexical meaning either. Rather, it is the realization of a PRES<sub>Ø</sub>, which contributes a relation of temporal identity.

## Duratives, negation and reference time identification

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**Overview:** In this paper we discuss the interaction between event structure (ES) and negation (as well as other operators). It has been proposed that negation stativizes eventive predicates as an aspectual operator (a.o. de Swart 1996), based primarily on data like those in (1).

- (1) a. *John dropped the book #for ten minutes / #until three.*  
b. *John didn't drop the book for ten minutes / until three.*

The presence of negation appears to render a durative adverbial (DUR) compatible with a telic predicate, a phenomenon that we will refer to as HighDUR Effect. We show that a) the HighDUR Effect does not arise from negation operating on the ES properties of the predicate, b) the effect is limited to LF configurations where DUR outscopes negation (i.e. is outside TP), and c) other exhaustive operators in the TP domain (focus, universals) also give rise to the HighDUR Effect. We claim that DUR in this configuration is referential in the sense that it identifies a portion of the reference time about which the TP gives a complete description (which is neither a state, nor homogeneous as has been suggested in the literature, see, for example, Csirmaz (2008)). We discuss the predicative (i.e. VP-internal) vs. referential (TP-external) uses of duratives, and finally draw some conclusions that bear not only on the issue of “stativizing negation” but also on the “until-debate” (discussed in Mittwoch (2001), de Swart (1996) and references therein). In particular, we argue against treating *until* as an NPI, and relate the “actualization effect” attributed to “eventive *until*” to information structure.

**DURs taking part in the HighDUR Effect are located outside TP:** The ES properties of a predicate have been claimed to be determined by an aspectual projection AspP between *v*P and VP (MacDonald 2008, Travis 1991). Moreover, as Tenny (1987) observed, whereas internal arguments can measure out an event, external arguments cannot. Based on these and other observations, MacDonald (2008) argues that AspP and everything AspP dominates define a syntactic space in which an element must fall in order to contribute to the ES properties of a predicate. With this in mind, consider the bare duratives (BareDURs) in (2).

- (2) a. *John dropped the book #an hour.*  
b. *John didn't drop the book #an hour.*

Like DURs, BareDURs are incompatible with telic predicates (2a). Unlike with DURs, however, negation has no effect in (2b). Consider a structural difference between the two as well, made salient in the *do so* construction: DUR is fine (3a), while BareDUR is out (3b).

- (3) a. *John ran for an hour / until 5PM and Bill did so for three / until 6PM.*  
b. *#John ran an hour and Bill did so three.*

If negation operated on the ES properties of the predicate, we would expect it to license BareDURs since these duratives are low in the VP (as shown by (3b)) where the ES properties are located (as noted above), measuring the runtime of the event (Morzycki 2004). In contrast, (3a) shows that *for*-PPs and *until*-PPs are outside *v*P, providing support for analyses that treat the HighDUR Effect as basically a scope effect (cf. Mittwoch 1977).

**High DURs identify a subpart of the reference time (i.e. are referential):** High DURs contrast with low BareDURs structurally and semantically. BareDURs resist a referential interpretation and are temporal predicates indicating *amounts of event runtime* fully covered by the predicate. DURs, meanwhile, specify a contiguous stretch of reference time that need not be covered by the event. Deictic modification confirms the referential status of DURs (5).

- (5) *John danced \*(for) those thirty minutes.*

Negated eventives are only compatible with such referentially interpreted duratives, as in (6):

- (6) *The guests didn't arrive for two hours.*

The above example can only be interpreted as referring to a particular two-hour period during which no guests arrived. An amount-of-time interpretation, where altogether there were two hours during which nobody came is unavailable (compare: *The guest danced two hours.*)

**The TP must give an exhaustive description of the reference of DUR:** We note that the HighDUR Effect requires not only that DUR be interpreted referentially, but also that the complement of DUR contain a suitable operator: (a) negation, (b) focus, or (c) a universal.

- (7) a. *John didn't arrive for two hours / until 5.*  
 b. *John locked (only) the GATE for two weeks / until Monday.*  
 c. *Everyone failed the test for two years / until last week.*

The data above (and more elaborate examples not shown here) cast doubt on semantic characterizations that rely on homogeneity or the so-called “subinterval property” (e.g. Csirmaz 2008 essentially claims that in the presence of negation the reference time behaves like a state, being true down to points). We argue that the crucial property these examples share is *exhaustivity* whereby there is a (sometimes implicit) restriction constraining the events to be looked at throughout the period specified by DUR, where the assertion is to be evaluated. For example, (7b) is evaluated in each instance where John locked anything at all, and holds true if what John locked was the gate every time. We give a formal account of this semantic intuition that also explains the sense of “expectation” typical of examples like (7a).

**The DUR>OP scope order must obtain at LF:** The syntactic requirement to obtain the DUR>Op configuration is an LF requirement – when other, independently well-established factors such as islands and reconstruction constraints permit, the right configuration can obtain across clause boundaries as well as clause-internally. For example:

- (8) *London is the only place that John thinks/\*resents that Mary has visited for two years.*

We discuss Hungarian *until*-clauses (Ürögdi 2009) and Neg-raising constructions from various languages to demonstrate the syntactic restrictions on the HighDUR Effect.

**The “actualization” observed in *until*-constructions is due to the referential interpretation of the *until*-phrase:** Examples like (9) have a strong implicature of a “polarity switch” (or “actualization”) at the time given in the *until*-phrase. (a.o. Giannakidou 2002)

- (9) *John didn't arrive until 5.* (implies: John arrived at 5.)

This effect has been argued to indicate the existence of an eventive, NPI *until* that contrasts with durative *until* (as in *John slept until 5.*) (7c) clearly shows, however, that eventive *until* is not an NPI. We argue that there is only one *until* and the implicature in (9) derives from *until* scoping over negation; it is interpreted referentially, and identifies a subpart of the reference time, at which the assertion is true. The actualization is an implicature that the assertion is no longer true for the part of the reference time not identified by *until*. This implicature can be made obligatory via focusing of the *until*-phrase, and in fact a similar contrastive interpretation is preferred with *for*-adverbials as well (observe the two examples in (7a)).

**Conclusions:** The findings we present lead to the conclusions that (a) negation does not affect the ES properties of the predicate, (b) the interpretation we label the HighDUR Effect involves a referentially interpreted DUR that, unlike predicative BareDURs inside the VP, does not require a durative predicate in its scope precisely because the event need not cover the entire duration of the DUR, rather (c) the DUR specifies a subpart of the reference time (a bounded time period) that, like other referential expressions, can form the basis of implicit or explicit contrast, leading to well-documented effects like the “switch reading” in *until*-clauses.

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## Sur la syntaxe et la sémantique de l'Aspect de la construction participiale absolue

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Dans ce travail je me propose d'analyser certains aspects concernant la syntaxe et la sémantique de l'Aspect de la construction participiale absolue (d'hors en avant CPA).

Considérons les exemples suivants tirés du français :

- (1) a. \*Une fois les pompiers arrivés en deux minutes, nous sortîmes de l'immeuble.  
b. Une fois les pompiers arrivés, nous sortîmes de l'immeuble.

Les exemples (1a) et (1b) montrent que l'adverbial 'en x temps' n'est pas compatible avec la CPA.

Legendre et Sorace (2003) observent que la CPA est soumise à deux restrictions aspectuelles : la télélicité et la dynamicité. La restriction sur la télélicité implique que l'événement décrit par la CPA doit être achevé avant que ne commence l'événement dénoté par la phrase matrice, tandis que la restriction sur la dynamicité implique que l'état dénoté par la CPA doit être le résultat d'un changement, c'est-à-dire d'une transition. La télélicité implique une transition et l'adverbial télélique 'en x temps' mesure la distance temporelle entre le début et la fin de la transition. En revanche, l'état issu d'une transition dénote un état résultant (ER). L'événement décrit en (1b) dénote donc une transition qui implique l'aboutissement à un état (Pustejovsky 1991). Or, bien que la CPA est soumise aux restrictions aspectuelles décrites ci-dessus, je voudrais défendre l'idée que la restriction sur la télélicité est liée à l'aspect grammatical (ou syntaxique) de l'événement décrit par le prédicat, tandis que la restriction sur la dynamicité ne concerne que l'aspect lexical (*Aktionsart*) du prédicat. À partir de ces observations, je voudrais montrer qu'en (1a) l'incompatibilité de l'adverbial 'en x temps' avec la CPA est à ramener au trait aspectuel [+résultat] qui est associé au participe passé *arrivé* et qui marque le résultat de la transition dénotée par le verbe *arriver*. Or, l'aspect résultatif (terminatif) de la CPA peut prendre une forme explicite à l'aide d'adverbes aspectuels tels qu'*une fois, aussitôt, sitôt, à peine, dès*, etc. ou il peut aussi être lexicalement vide (Vinet 1989).

Dans mon analyse, je pose l'hypothèse que la CPA ait un aspect résultatif (terminatif) et que ce dernier se distingue de l'aspect télélique (perfectif) qui, en revanche, est associé à un événement dénotant une transition composée d'une phase initiale, d'une phase de milieu et d'une phase finale (Vet 2002). À partir de ces observations, je voudrais adopter la structure interne de la prédication terminative, telle qu'elle a été élaborée par Vet (2002), afin d'expliquer la syntaxe de l'aspect de la CPA. Vet (2002) propose de représenter la structure interne de l'éventualité terminative <e> de la manière suivante :

- (2) état  $\alpha$      <e>[DEB     MIL     FIN]     état  $\beta$

En (2), DEB, MIL et FIN correspondent, respectivement, au début, à la phase de milieu et à la fin de la transition, tandis que l'état  $\alpha$  et l'état  $\beta$  correspondent, respectivement, à l'état antérieur et à l'état postérieur à la transition. Du point de vue aspectuel, Vet (2002) observe que l'état  $\beta$ , c'est-à-dire le résultat du procès décrit par l'événement terminatif, est associé à un aspect rétrospectif. En outre, il observe que l'aspect perfectif (télélique) est associé à la phase finale de l'éventualité <e>. Du point de vue syntaxique, Cinque (1999) place l'Asp<sup>rétrospectif</sup> après l'Asp<sup>terminatif</sup> et l'Asp<sup>perfectif</sup> :

- (3) ...[Asp<sub>terminatif</sub> [Asp<sub>perfectif</sub> [Asp<sub>rétrospectif</sub>...

À la différence de Cinque (1999), Vet (2002) ne parle pas d'aspect terminatif dans son analyse mais il emploie le terme *terminatif* pour identifier une éventualité transitionnelle qui mène à un résultat. Si l'on inclut la hiérarchie aspectuelle reportée en (3) à l'intérieur la structure syntaxique de la CPA élaborée par Belletti (1990), on obtient la structure suivante :

- (4) [SC... [Agr<sub>p.passé</sub> [Asp<sub>terminatif</sub> (résultatif) [Asp<sub>perfectif</sub> (télique) [Asp<sub>rétrospectif</sub> [SV [SN...

Dans la structure en (4), l'aspect terminatif et l'aspect rétrospectif sont représentés par deux projections aspectuelles différentes. Dans l'optique de l'analyse de Vet (2002), l'Asp<sub>rétrospectif</sub> est associé au résultat (état β) du procès décrit par l'événement terminatif. Plus précisément, Vet (2002) observe que l'Asp<sub>rétrospectif</sub> a pour fonction de limiter l'assertion au résultat (état β) du procès. Autrement dit, Vet (2002) analyse l'Asp<sub>rétrospectif</sub> comme un aspect grammatical et non pas comme un aspect lexical. À partir de ces observations, je pose l'hypothèse que, dans la structure de la CPA reportée en (4), l'Asp<sub>rétrospectif</sub> ait pour fonction de marquer au niveau de l'assertion l'achèvement de l'événement décrit par la CPA avant que ne commence l'événement décrit par la phrase matrice. En outre, je pose l'hypothèse que, dans la CPA, l'Asp<sub>terminatif</sub> soit associé à l'état résultant de la transition décrite par le prédicat et que donc l'Asp<sub>terminatif</sub>, contrairement à l'Asp<sub>rétrospectif</sub>, doive être analysé comme un aspect lexical. En revanche, l'Asp<sub>perfectif</sub>, tout comme l'Asp<sub>rétrospectif</sub>, est analysé comme un aspect grammatical qui a pour fonction de limiter l'assertion à la phase finale de l'éventualité décrite par le prédicat de la CPA. Sur la base de la structure en (4), je voudrais défendre l'idée que Asp<sub>rétrospectif</sub> et Asp<sub>perfectif</sub>, en tant qu'aspects grammaticaux, ne contiennent pas le trait aspectuel [+résultat] mais que ce trait est associé à l'aspect lexical Asp<sub>terminatif</sub>.

Dans l'optique de l'analyse de Belletti (1990), le V de la CPA monte en Asp<sup>o</sup> et ensuite en Agr<sup>o</sup> pour former le participe passé. Plus précisément, Asp<sup>o</sup> contient la flexion participiale, tandis que Agr<sup>o</sup> contient les traits de genre et de nombre. Suite à ces observations, j'entends montrer qu'en (4) la flexion participiale est contenue en Asp<sub>terminatif</sub><sup>o</sup> et qu'elle correspond au trait aspectuel terminatif marquant l'état résultant. En (4), ce sont d'abord les aspects grammaticaux (Asp<sub>rétrospectif</sub> et Asp<sub>perfectif</sub>) concernant l'assertion qui sont satisfaits. Une fois que la valeur perfective est satisfaite et qu'on aboutit à un état résultant, le trait aspectuel terminatif est vérifié par le participe passé en Asp<sub>terminatif</sub><sup>o</sup>.

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## On non-distributive stative predicates

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When used as *stage level predicates* (SLPs), adjectives like *honnête* (*honest*) can receive two readings:

- (1) a) Ana m'a vendu la télé. b) Elle a été honnête.  
*Ana sold me the TV-set. She was-PASSÉ.COMP honest.*

On the “m-reading” of sentence (1b), Ana is said to have been honest in the *manner* she performed the action *e* described in (1a), while on the “d-reading” of (1b), she is said to have been honest to *decide* to perform this action *e*.

In the neo-Davidsonian framework, these adjectives are traditionally assumed to describe states (cf. e.g. Parsons (1990), Mittwoch (2005)). However, when used as SLPs, adjectives like *honest* are different from canonical SLPs like *beautiful*, because the state *s* they describe ontologically depends on a simultaneous action *e*: one cannot be occurrentially honest without being simultaneously engaged in a certain action (where an event of deciding is also an action). SLPs denoting a state depending on a simultaneous action will be labelled “action-dependent state predicates” (ADSPs). I will assume that on the m-reading, the state *s* denoted by these predicates depends on a co-temporal action *e* described in the surrounding discourse (i.e. such that  $\tau(e)=\tau(s)$ ),<sup>1</sup> while on the d-reading, it depends on the co-temporal (implicit) event of deciding *e'* to perform this action *e*.

The problem. Whereas ADSPs like *honnête* display the ambiguity described above, others like *bruyant* (*noisy*) receive the m-reading only. For instance, (2b) cannot mean that Ana was noisy to decide to play outside:

- (2) a) Ana a joué dehors. b) Elle était/ a été bruyante. (m-reading OK, \*d-reading)  
*Ana played outside. She was-IMP/PASSÉ.COMP noisy.*

The empirical problem addressed here is the following. In French, although ADSPs like *bruyant* are as acceptable with the *imparfait* as with the *passé composé* (cf. (2)), ADSPs like *honnête* are hardly acceptable with the *imparfait*, cp. (1) to (3).<sup>2</sup> A problem arises under the two readings of the ADSP:

- (3) a) Ana m'a vendu la télévision. b) ?? Elle était honnête.  
*Ana sold me the TV-set. She was-IMP honest.*

Interestingly, the *imparfait* is even less acceptable with ADSPs like *honnête* when the context blocks the m-reading, as in (4b) (arguably, Ana cannot be clever in the manner she took her nap):

- (4) a) Ana a fait une sieste. b) \*Elle était intelligente. (m-reading pragmatically implausible, \*d-reading)  
*Ana took a nap. She was-IMP clever.*

The fact that (4b) (d-reading only) is worse than (3b) (m- or d-reading) suggests that the *imparfait* is more problematic with the d-reading. Before showing how the data can be explained, I will explicate the relevant semantical differences between *honnête*- and *bruyant*-ADSPs.

(Non-) distributive predicates and *in medias res/a posteriori* evaluative adjectives. The relevant aspectual difference between *honnête*- and *bruyant*-ADSPs concerns the temporal relation between the described state *s* and the simultaneous action *e* through which *s* takes place.

Intuitively, when a seller is honest through a selling *e*, he does not necessarily have the opportunity to be honest during proper subparts of *e*. In fact, he often needs the whole transaction to manifest his honesty (except if the selling itself is composed of several dealings). Put differently, the state *s* satisfying the predicate *honnête* which takes place during *e* does not necessarily have subparts *s'*, *s''*... also satisfying the

<sup>1</sup>  $\tau$  is the function which takes an eventuality *v* as its argument and gives the temporal trace of *v* as its value.

<sup>2</sup> The reading under which the adjective is used as an ILP and triggers life-time effects is excluded from the discussion. On this irrelevant reading, the *imparfait* is unproblematic provided we assume that the subject is dead. Sentences like (3b) do also have an acceptable reading when *honnête* is used as a SLP, but only if one fills it out with an implicit temporal adverbial like *Ce jour-là* (“This day”). However, in this case, *honnête* does not describe a state simultaneous to a particular action anymore, and is thus not an ADSP.



predicate *honnête*. On the contrary, if one is noisy during an action *e*, one is necessarily also noisy during proper subparts of *e*. In other words, the state *s* satisfying the predicate *noisy* which takes place through *e* necessarily has subparts *s'*, *s''*... satisfying also the predicate *noisy*. We can capture this difference in stating that *noisy*-ADSPs are distributive predicates, while *honnête*-ADSPs are not. Of course, the idea that some stative predicates do not have the subinterval property is unusual, but it should be stressed that the fact to be explained (that these predicates are not compatible with the *imparfait*) is *per se* very surprising, since the *imparfait* is the tense of stative predicates *par excellence*.

Another related difference between *honnête*- and *noisy*-ADSPs concerns the way one gets to know that *s* (the occurrential state of noisiness or honesty) is taking place. Since proper subparts of an *s* satisfying the ADSP *noisy* also satisfy *noisy*, one can easily evaluate the subject as noisy before *s* reaches its end. On this sense, *noisy*-ADSPs may be said *in medias res* evaluative adjectives. On the contrary, no subpart of an *s* satisfying the ADSP *honnête* must also satisfy *honnête*. Besides, the outcome of *e* is generally the main evidence to evaluate the state of honesty of the agent during *e*. Thus, on a normal context, one is generally obliged to wait the end of *s* (whose temporal trace equals the one of *e*) in order to evaluate the subject as honest. On this sense, *honnête* ADSPs may be said *a posteriori* evaluative adjectives. I will now review the relevant properties of imperfective tenses like the *imparfait* which are responsible for the conflict between this tense and *honnête*-ADSPs.

The epistemic value of imperfective tenses. Apart from the special case of the *imparfait narratif*, the *imparfait* is an imperfective tense as the English progressive. Imperfective sentences denote an event *e'* which is a part of a possible event *e* denoted by the corresponding perfective sentences. An important property of imperfective sentences for our purpose is the one described by Naumann and Piñón (1997) and Jayez (1999), and illustrated by (5):

- (5) ??Mary is drinking three glasses of beer.  
 ??Marie buvait trois verres de bière.

They observe that imperfective tenses are strange in assertions which are difficult to evaluate as true or false, i.e. in a context where we do not have enough evidence to infer that the asserted event *e'* is a part of a possible event *e* denoted by the corresponding perfective sentence. This is by default the case for (5): if we see Mary drinking a glass of beer, we cannot infer in general that she is likely to drink three glasses of beer. Let us call this constraint the “Epistemic Condition” of imperfective tenses.

The problem of the *imparfait* on the m-reading. The problem of (3) under the m-reading is basically of the same nature as the one in (5). Under this reading, the sub-state *s'* asserted in (3b) takes place through a sub-part *e'* of the selling *e* denoted in (3a). Given the Epistemic Condition of imperfective tenses, we should be able to infer that the sub-state *s'* will result on a state *s* satisfying the predicate *honnête* (simultaneous to the selling *e*). However, in a default context, this condition is not likely to be satisfied, since the ADSP *honnête* is a non-distributive predicate and an *a posteriori* evaluative adjective.

The problem of the *imparfait* on the d-reading. The problem of the d-reading (the only available in (4b)) is related to the anaphoric value of imperfective tenses. Under this reading, the sub-state *s'* asserted by (4b) takes place through the decision to take a nap. However, the previous context does not provide a description of this decision. I will assume that as in the case of *too*, accommodation cannot take place with *imparfait*. Thus, contrary to all expectations, the description of the nap-taking – the only event description provided by the context – gives the reference point for the imperfective sentence. This anaphoric link oddly invites one to infer that Ana was clever *during* her nap. This is the reason why (4b) is even worse than (3b).

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**Italian *sembra/pare* vs. *sembrerebbe/parrebbe*: modal, evidential and argumentative aspects**

The pair *sembrare / parere* ('to seem') belongs to a series of verbs, including the modals *potere* ('can') and *dovere* ('must'), that are used in various constructions in the indicative present or in the conditional form to express epistemic modality and evidentiality in Italian, as part of an interesting zone of the language system at the interface between grammar and lexicon (cf. Aikhenvald 2007, Squartini 2008).

Both *sembrare* and *parere* (cf. Kratschmer 2006, forth.) can take both sub-propositional and propositional arguments. In the former case, they express the conformity of an entity *x*'s observable properties *O* to a certain type *y*, be it in the sense of a relation of similarity between *x* and *y* (*y* is construed as an autonomous discourse referent), be it in the sense of a probable/provisory inclusion of *x* in the category *Y* (*Y* is construed as a property). When *sembrare/parere* have scope over a proposition, the verbs express the conformity of available evidence *o* to an interpretation *p*, and hence the speaker's provisory conclusion *p* on the basis of *o*. Both the categorizing uses and the uses with propositional arguments have a strong evidential-inferential component: the speaker provisorily categorizes *x* as *Y* in virtue of *O*, and provisorily infers *p* in virtue of *o*, respectively. What distinguishes the two types of readings is above all the fact that with propositional arguments *o* is not a set of properties of a specific entity *x*, but simply a set of observable states of affairs or discourses. As in 'seem'-verbs in other European languages (cf. Cornillie 2007 and De Haan 2007), the propositional readings are favored by certain syntactic environments, such as the verbs' raising use, the impersonal use with a complement clause (*sembra/pare che p*), parenthetical use, or complex impersonal constructions with a complement clause (e.g. *sembra palese che p* 'it seems clear that *p*' or (*mi*) *sembra di capire che p*, literally 'it seems (to me) to understand that *p*').

In modal verbs and 'seem'-verbs, the function of the opposition between present tense and conditional form (with respect to the latter cf. Dendale & Tasmowski 2001, Miecznikowski 2008) is difficult to assess, as illustrated for example by the debate launched some years ago in Romance linguistics as to *dovrebbe* (it.) and *devrait* (fr.) (cf. Dendale 1994, 1999, Kronning 2001, Squartini 2004, Pietrandrea 2005, Rocci 2006). Certain uses of this kind of verbs in the conditional form do not differ from those in the present tense on the level of propositional content and seem to have specific modal and evidential properties that are not fully compositional, i.e. that cannot be reduced in a straightforward way to a combination of the lexeme's semantics and the semantics of the conditional form.

In this paper, this problem is addressed with respect to inferential uses of *sembra/pare* (present tense) vs. *sembrerebbe/parrebbe* (conditional form), within an approach that takes into account semantic, pragmatic and argumentative aspects. Evidence from a four million word corpus of Italian economic-financial newspapers will be used to show that the opposition between present tense and conditional has to do with the way in which the two forms interact with lexically activated presuppositions and has textual and argumentative implications in some cases. In particular, we claim, mood influences the construction of the information source presupposed by inferential *sembrare/ parere*. Both forms are used to assert – on the basis of a presupposed information source *o* – a conclusion *p* that is provisory in the sense that it might be revised when more data become available (things may be different from what they seem). The conditional differs from the present tense, however, by construing *o* not only as possibly incomplete, but as problematic and not being part of the common ground (cf. Nemo 2007) taken for granted. This analysis accounts for a number of corpus findings, among which the following:

- *Sembrare/parere* is not used inferentially in the conditional form when combined with an experiencer role expressed by a personal pronoun (the type *mi sembra/pare*). These uses presuppose direct and subjectively highly suggestive evidence (*o* cannot be a report, for instance), and the

conditional seems incompatible with this feature. In the few cases the conditional combines with a personal pronoun, it has a clearly hypothetical, non factual reading (e.g. *mi sembrerebbe strano* 'it would seem strange to me [if *p* was true]').

- More generally, the conditional form is not used with direct sensory evidence and refers more often than the present tense to an information source that includes reported elements.
- *Sembrerebbe/parrebbe* expresses more often than *sembra/pare* an inference based on conflicting evidence.
- The conditional is more often than the present tense used to polyphonically express a point of view contrasted with others, in contexts in which an argumentative discussion is overtly construed as such and the status of available information as "evidence" may be controversial.

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## Qualificational meanings, illocutionary signals, and the cognitive planning of language use

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This paper aims to show how a clear perspective on the cognitive systems and processes involved in language production can help to solve a number of persistent problems in the analysis of TAM and related categories, and particularly of the semantic categories of deontic modality, volition, intention and directivity – notions which raise the issue of the relationship between qualificational (or TAM) categories and illocutionary categories, and what these stand for/how these should be represented in a model of the human linguistic faculty.

The empirical basis for the paper is provided by an analysis of a representative sample of corpus instances of a few Dutch expressions which are traditionally labelled ‘deontic modal’ – viz. the auxiliaries *moeten* ‘must’ and *mogen* ‘may’ – and ‘volitional’ – viz. the verb *hopen* ‘to hope’ (these analyses as such have been reported in AUTHOR, Byloo and Diepeveen 2007, AUTHOR, Diepeveen and Byloo 2007).

The analysis of these forms strongly suggests:

- (i) that the traditional definition of deontic modality – as part of the system of modal meanings, and more broadly of TAM or ‘qualificational’ meanings – in terms of the notions of ‘permission’ and ‘obligation’ is not maintainable, and should be replaced by one purely in terms of an assessment of the degree of moral acceptability of the state of affairs (as e.g. expressed by forms such as *(un)fortunately, it is good/better, regret, applaud*, but also by modal auxiliaries such as *must* and *may* in certain usages – e.g. *we must find a way to express our gratitude to him for having helped us solving this problem*);
- (ii) that the notions of ‘permission’ and ‘obligation’ (as e.g. expressed in certain kinds of uses of the modal auxiliaries – e.g. *you may go now*) are ‘speech act’ notions, and belong in the same category as the imperative mood, i.e. they are ‘directive’ – although these directives do relate to qualificational categories such as deontic modality (but also dynamic or boulomaic modality) in the sense that the latter can serve, in Searle’s (1976) terms, as a ‘sincerity condition’ for the directives;
- (iii) that the notions of intention and volition, which have received very different analyses in the literature in terms of their position vis-a-vis modal categories, cannot be considered modal, or more generally qualificational, dimensions either, but constitute separate types of categories, with a position in between the qualificational and the speech act categories.

As the paper will aim to demonstrate, all of this neatly falls in place – hence receives a basic explanation – when seen in the context of a model of the cognitive planning of language use, and of action more in general: all these different semantic or functional categories can be taken to ‘encode’ different stages in such a model, as schematically rendered in (1).

| (1) <i>Level of cognitive operation</i>   | <i>Reflection in language</i>         |
|---|---------------------------------------|
| conceptual analysis (incl. qualification of SoAs)   | expression of SoAs and qualifications |
| ↓   |                                       |
| decision that something should change in the world<br>(state of wanting a change)               | volitional expression                 |
| ↓   |                                       |
| decision to act (verbally or manually) so as to change the world<br>(state of intending to act) | intentional expression                |
| ↓   |                                       |
| action:    communicative<br>motor   | illocutionary force marker            |

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## Processes with culmination

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The accomplishments aspectual class is heterogeneous as various aspectual classifications illustrate (see, Moens, 1987, Rothstein 2004, a.o.).

Related to the complex constitution of accomplishments, we have to consider that, in most cases, one of the verbs' arguments, usually an internal one, determines the telicity or atelicity of the predication and, thus, its classification as an accomplishment or as an activity. Some authors, such as Verkuyl (1993), assume that the semantics of the verb determines, at least partially, the aspectual profile of the predication and raise the question of what is the basic nature of the predications. For example, a verb like *ler* (to read) projects an eventuality without a culmination point in its aspectual nucleus (cf. Moens, 1987), i.e. an activity, or, instead, projects an eventuality with a culmination point, i.e. an accomplishment.

In order to give an answer to this question, Filip (1999) proposes the notion of “incremental eventuality” and Piñon (2006) suggests a division between “weak” and “strong accomplishments”.

The data of European Portuguese (EP) seem to indicate that, in fact, we can not consider only a partition between activities and accomplishments. Instead, it is necessary to take into consideration an intermediate aspectual class, in which it is clear the interaction between the semantic of the nominal expressions that constitute the predication, namely the internal arguments, and the aspectual profile of the predication as a whole. Therefore, we will call this aspectual class “*accomplishable activities*”. This class includes those predications that are underspecified in respect to the telicity at the level of the “inner aspect” (Verkuyl, 1993).

So a verb like *almoçar* (to have lunch) gives rise to an eventuality characterized by its durativity and telicity. These aspectual properties are independent of the properties of the internal argument (its count or mass nature), as we can see in (1a) and (1b). (1c) shows that the omission of this internal argument does not affect the aspectual profile of the basic predication. Therefore, the verb *almoçar* projects an accomplishment at the level of the inner aspect.

A verb as *perseguir* (to chase) projects an eventuality characterized by its durativity and atelicity, even if its direct object is a quantized predicate and even if there is a Goal phrase that determines an end to the path, as “até à estação” (up to the station), in (2). *Perseguir* projects an activity at the level of the inner aspect.

Finally, a verb like *comer* (to eat) projects “*accomplishable activities*”. In (3), it is the properties of the internal argument that interfere in aspectual reading of the predication, as

mentioned many times in the literature: a count argument favours an accomplishment reading (3b); a mass or null complement favours an activity reading (see (3a) and (3c)).

- (1) a. O João almoçou sopa {em cinco minutos / # durante cinco minutos}  
the João lunched soup {in five minutes / # for five minutes}
- b. O João almoçou um prato de sopa {em cinco minutos / # durante cinco minutos}  
the João lunched a bowl of soup {in five minutes / # for five minutes}
- c. O João almoçou {em cinco minutos / # durante cinco minutos}  
the João lunched {in five minutes / # for five minutes}
- (2) O João perseguiu o ladrão (até à estação) {\* em cinco minutos / durante cinco minutos}  
the João chased the thief (up to the station) {\*in five minutes / for five minutes}
- (3) a. O João comeu sopa {\* em cinco minutos / durante cinco minutos}  
the João ate soup {\*in five minutes / for five minutes}
- b. O João comeu um prato de sopa {em cinco minutos / # durante cinco minutos}  
the João ate a bowl of soup {in five minutes / # for five minutes}
- c. O João comeu {\* em cinco minutos/ durante cinco minutos}  
the João ate {\* em cinco minutos / durante cinco minutos}

The presentation will have the following structure. In the first place we point out some limitations of several aspectual classifications concerning the distinction activities/ accomplishments and we will consider also some problems raised by the EP data concerning Filip (1999) e Piñon (2006) proposals.

In the second place we propose an aspectual classification including an intermediate class, “*accomplishable activities*”, and the EP data on which the proposal is grounded.

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## Testing the licensing constraints of Negative Polarity Items (NPIs) through Polarity Subjunctive in Spanish

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Previous behavioural and ERP studies on the processing of Negative Polarity Item (NPI) constructions in German (Drenhaus et al 2005, Saddy et al 2004, Vashisth et al 2008) and English (Xiang et al 2009) have addressed how the licensing of NPI constructions proceeds in real-time and whether the parser respects the semantic and structural conditions required in NPI licensing. In particular, these studies examined how the presence/absence of licenser and the structural position of this licenser affected the licensing of the NPI in the sentence. In the current research, we exploit an agreement requirement with the mood of the embedded verb in NPI constructions in Spanish to examine the role of mood information in on-line NPI licensing and to investigate how NPI constructions that require a specific mood agreement at the embedded verb. Furthermore, the mood information at the embedded verb is used to test whether the on-line licensing of NPI constructions is done locally or at a sentence level.

In Spanish, the polarity subjunctive mood appears in embedded clauses in contexts in which the matrix predicate is under the scope of negation (Laka 1990, Uribe-Etxebarria 1994, Borgonovo 2002). This study used the polarity subjunctive and the presence of a NPI in the embedded clause to examine how mood affected local licensing with the NPI when there is no licenser in the main clause and the sentence is globally ungrammatical.

The following factors were manipulated in the experimental sentences in (1) in Spanish: 1) the absence of a negative operator in the main clause; 2) the presence of indicative or subjunctive mood in the embedded verb and 3) the presence of a NPI or an NP in post-verbal subject position within the embedded sentence. Results of a self-paced reading experiment (n=35, L1 Spanish) showed a highly significant effect ( $p < 0.01$ ) for *mood* at the preposition immediately following the verbal auxiliaries in the NPI conditions, where there was a 54 millisecond RT difference at the verbal auxiliary in subjunctive mood (*vaya*) in (1a) relative to the auxiliary in indicative mood (*va*) in (1b). The second effect was a significant effect for *NP type* ( $p < 0.05$ ) at the adverbs immediately following the NPI/NP position in the Indicative conditions, where there was a 83 millisecond RT difference at the adverbial (*adv2*) immediately following the NPI (*nadie*) in (1b) relative to the adverbial that followed the NP (*Inés*) in (1d). Both significant effects occurred one word after the critical region.

These results show that the parser is sensitive to mood information when processing NPI constructions. Furthermore they indicate that this mood information is used in order to establish the licensing conditions of the NPI and to determine which sentences violate the licensing constraints.

### Experimental sentences:

#### (1) NPI conditions:

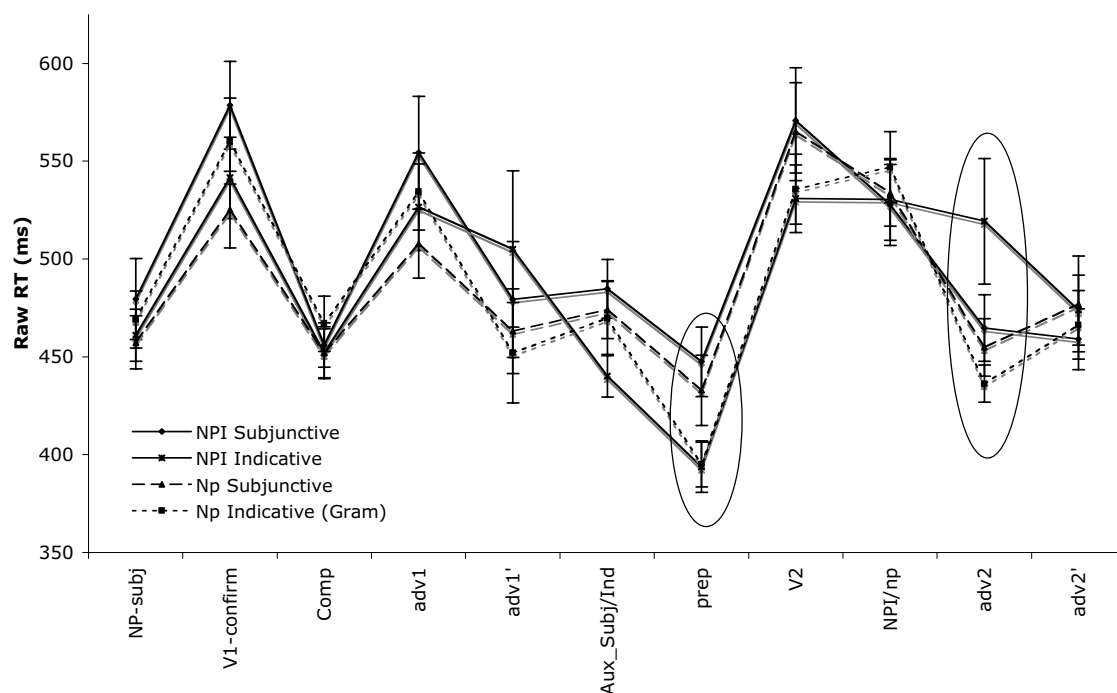
- a. \*Pedro asegura que en breve **vaya** a venir **nadie** a cenar.  
*Pedro assures that in short aux-subj prep come nobody to have dinner*
- b. \*Pedro asegura que en breve **va** a venir **nadie** a cenar.  
*Pedro assures that in short aux-ind prep come nobody to have dinner*  
'Pedro assures that nobody will come shortly to have dinner'

#### NP conditions:

- c. \*Pedro asegura que en breve **vaya** a venir **Inés** a cenar.



- Pedro assures that in short aux-subj prep come Ines to have dinner  
d. Pedro asegura que en breve **va** a venir **Inés** a cenar.  
Pedro assures that in short aux-ind prep come Ines to have dinner  
'Pedro assures that Ines will come shortly o have dinner'



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TAM A L'EPREUVE DU KHMER / LE KHMER A L'EPREUVE DE TAM :  
LE CAS DE *ba:n*

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**TAM** (pour temps / aspect / modalité) renvoie à un ensemble de notions qui par leur contenu sont fortement ancrées dans la description des langues indo-européennes, langues qui ont une morphologie verbale développée. A titre d'exemple on peut citer la distinction 'imperfectif / perfectif' dans la définition (qui fait toujours référence) qu'en propose B. Comrie (slavisant au départ) : « *perfectivity indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation ; while the imperfective pays essential attention to the internal structure of the situation* » (1976 : 16). Les notions de perfectif et d'imperfectif (le plus souvent dans l'acception que leur donne Comrie) se retrouvent dans les descriptions du système verbal de langues sans morphologie verbale, comme c'est le cas, notamment, de la majorité des langues d'Asie du Sud Est : cf. Iwasaki & Ingkaphirom (2005) pour le thaï, Romero (2008) pour le birman, Jenny (2005) pour le mon. Une telle 'exportation' mérite d'être questionnée.

Dans cette communication nous proposons une série d'observations concernant le système verbal du khmer (langue peu documentée à ce jour) en tant que contribution sur la réflexion qu'entend permettre Chronos IX sur **TAM** à travers la diversité des langues. S'il est vrai, comme l'écrit M. Haspelmath (1995 : 7) que « *different languages have always been regarded as roughly equivalent instantiations of the more abstract notion of 'human language', a unique and universal endowment of human beings* », cette 'équivalence', qui suppose modulations, approximations et reformulations, nous paraît devoir être pensée dans les termes suivants : les langues font des choses différentes avec des moyens comparables **et** des choses comparables avec des moyens différents.

1. En khmer la catégorie du temps (en tant que désignant la localisation du procès en référence au moment de locution) est marquée uniquement par des adverbes et des circonstants. Seule exception : l'existence d'un marqueur spécifique *ts:p* pour exprimer le passé immédiat.

2. Si l'on se réfère à la typologie des procès proposée par Vendler (état / propriété, activité, accomplissement), les verbes simples (quel que soit leur contenu lexical propre) désignent soit des propriétés soit des activités (ce second cas regroupe aussi bien V<sub>intr.</sub> que V<sub>trans.</sub>). Une construction avec un V<sub>trans.</sub> 'activité' est souvent limitée à l'expression d'un seul argument (en général l'objet) : l'événement est présenté en bloc (on peut parler d'une syntaxe thélique) :

(1) *p<sup>h</sup>tsǎh      nih      saŋ      nǝi      c<sup>h</sup>nam* 1980

Maison      déict.      *construire*      à      année-1980

« La construction de cette maison a eu lieu en 1980 »

3. La construction d'un procès de type accomplissement (télique) met en jeu 3 types de procédés très souvent combinés :

- préfixation du verbe simple avec *ban-* qui rend obligatoire l'expression de l'agent validant le procès ;
- présence de particules finales comme *haʒj* 'être fini' ;
- construction sérielle de la forme **X V1 (Y) V2 (Z)** où V1 et V2 sont des verbes pouvant apparaître de façon autonome comme prédicat unique dans une proposition.

Nous donnons un exemple combinant construction sérielle et particules finales :

- (2) *tʰwə: mɛc baʒ riʒ ba:n (V1) kaʒt (V2) laeŋ (V3) tɛi haʒj*  
 faire comment si histoire obtenir naître monter aller (partic.) partic.  
 « Que faire puisque cette histoire (une relation amoureuse entre deux jeunes gens) est bel et bien consommée (...) »

Dans cet exemple (repris de Lebaud & Vogel (2009)), on a une construction sérielle avec trois verbes *ba:n* 'obtenir', *kaʒt* 'naître' et *laeŋ* 'monter' et deux particules (d'origine verbale) : *tɛi* et *haʒj*. On peut décomposer l'événement complexe que marque la combinatoire entre les trois verbes de la manière suivante : la relation née (*kaʒt*) entre les deux jeunes gens, de possible est devenue effective (*ba:n*) et elle est désormais solidement établie (*laeŋ*). Les deux particules *tɛi* et *haʒj* contribuent à l'interprétation de l'événement comme irréversible.

4. Le verbe *ba:n* est un des rares verbes du khmer à avoir fait l'objet de descriptions assez fines dans des perspectives différentes qui illustrent certaines des questions que soulève TAM dans une langue comme le khmer : Bisang (1988), Hayman (1998), Enfield (2001) et Lebaud & Vogel (2009). Dans une construction sérielle *ba:n* peut apparaître soit en position de V1 soit en position de V2 (Vn si plus de deux V) - en khmer, le dernier V d'une construction sérielle est le verbe dominant.

A la différence de Hayman et Bisang qui défendent la thèse d'une grammaticalisation / désémantisation de *ba:n* lorsqu'il n'est pas le seul V de la proposition (il devient un auxiliaire aspectuel ou modal selon les cas), nous proposerons une caractérisation unitaire de la sémantique de *ba:n*. *ba:n* pose l'existence d'un chemin (possible et non pas nécessaire) entre deux positions : une position première *e1* qui se présente comme une position d'extériorité par rapport à une position de référence *e2* (*ba:n* relève d'une sémantique de l'accès). Selon le co-texte on privilégie *e1* ou *e2* (mais les deux positions sont toujours prises en compte) : s'il s'agit de la position de référence *e2*, l'existence du chemin est validée (interprétation 'aspectuelle' du type 'réussite') ; s'il s'agit de la position d'extériorité première *e1* rien ne garantit la validation du chemin : on souligne la distance entre les deux positions (interprétation modale du type 'possible'). Ces deux interprétations sont attestées que *ba:n* soit en position de V1 ou de V2, mais avec des modulations importantes. On verra également que la position *e1* est privilégiée dans un énoncé négatif (on nie l'existence d'un chemin *e1* – *e2*) ou interrogatif (on s'interroge sur l'existence d'un tel chemin).

Dans cette perspective les différentes valeurs de *ba:n* sont analysées comme le produit d'une combinatoire complexe entre *ba:n* et les autres constituants de la relation prédicative. Cette combinatoire doit être définie sur le plan sémantique, syntaxique et pragmatique.

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En khmer il existe différents marqueurs de négation : *mən*, *ʔat* et *kəm* sont les plus fréquents. L'emploi de *kəm* est limité aux énoncés modaux. Dans certains de ses emplois *kəm* est en concurrence avec une autre négation : *mən*. Dans cette communication, nous proposons une caractérisation de la sémantique de *mən* et de *kəm*, pour ensuite la mettre à l'épreuve de différents types d'emplois (d'autres données seront discutées dans le cadre de l'exposé).

Lorsqu'elle porte sur un verbe, la négation *mən* signifie que le procès *p* n'est pas validé (*p* n'est pas le cas) ou non validable (énoncés modaux). *kəm* signifie non pas la non validation de *p* mais la sélection de *non p* (noté *p'*) comme la valeur de référence à valider. En d'autres termes, *kəm* met en avant *p'* comme valeur opposée à *p*. La dimension négative supportée par *p'* suppose que *p* soit actualisée (en particulier dans les énoncés impératifs).

### 1. Impératifs.

En khmer une injonction est exprimée par la forme nue du verbe qui peut être suivie de *təi* ('aller') ou de *cəh* ('descendre') : dans ces emplois *təi* et *cəh* ont le statut de particules finales et marquent une orientation du procès en direction de l'interlocuteur. Par ailleurs, lorsqu'il s'agit d'une demande ou d'un conseil, le verbe est précédé par *səm* 'demander'. Dans les injonctions positives le procès a un double statut : visé par le locuteur, validable pour l'interlocuteur (les deux points de vue coexistent selon des modalités variables : ordre, conseil, invitation, permission, etc). Dans les injonctions négatives, seul compte le point de vue du locuteur qui vise *p'* (l'interlocuteur est le support actualisé ou virtuel de *p*)

*kəm* est la seule négation possible avec un impératif :

- |  |  |
|--|--|
| 1a)- <i>təi</i> <i>təi</i> !<br>aller    aller <sub>particule</sub><br>« vas-y ! (si je ne peux pas te retenir) »  | 1b)- <i>təi</i> <i>cəh</i> !<br>aller    descendre <sub>particule</sub><br>« Vas-y! (je t'autorise, il n'y a aucun problème) » |
| 2)- <i>kəm</i> <i>təi</i> * <i>təi</i> (* <i>cəh</i> ) !<br><i>kəm</i> - aller- aller <sub>particule</sub> descendre <sub>particule</sub><br>« N'y vas-pas ! » |  |

Dans (1a) la seconde occurrence de *təi* (particule) signifie que la décision est du seul ressort de l'interlocuteur ; dans (1b) la présence de *cəh* (particule) donne une valeur permissive à l'énoncé. Dans (2) avec *kəm* les particules *təi* et *cəh* qui marquent que la validation du procès *p* est du ressort de l'interlocuteur, sont bloquées. En effet, dans (2) *kəm* signifie que le locuteur veut imposer à son interlocuteur *p'* ('ne pas aller') comme à valider (il attribue à ce dernier le projet de valider *p* 'aller').

Le fait que *kəm* marque la sélection de *p'*, explique l'impossibilité de (3b) par rapport à (3a) (*p<sup>h</sup>lism* 'tout de suite' ne peut spécifier que le mode de validation de *p* 'dormir' par l'interlocuteur). Quant à (3c) il signifie la sélection de *p'* 'ne pas dormir':

- |  |  |   |
|--|--|---|
| 3a)- <i>de:c</i> <i>p<sup>h</sup>lism</i> !<br>Dormir    immédiatement<br>« Couche-toi immédiatement ! » | 3b)- * <i>kəm de:c</i> <i>p<sup>h</sup>lism</i> !<br><i>kəm</i> dormir-    immédiatement<br>?? « ne dors pas immédiatement » | 3c)- <i>kəm de:c</i> !<br><i>kəm</i> -dormir<br>« Ne dors pas ! » |
|--|--|---|

### 2. Concurrence entre *mən* et *kəm*

- |  |
|--|
| 4a)- <i>koat</i> <i>prap</i> <i>k<sup>h</sup>əm</i> <i>kəm</i> <i>ʔəj</i> <sup>1</sup> <i>mə:k</i> <i>təe</i> <i>k<sup>h</sup>əm</i> <i>mə:k</i> |
|--|

<sup>1</sup> La présence *ʔəj* ('donner') dans les exemples (5) et (6) signifie que l'on a une relation de dépendance entre la séquence à gauche et la séquence à droite de *ʔəj* (*ʔəj* confère une dimension causative à *prap* 'dire').

il- dire- je- **kəm-ʔəj-** venir seulement je- venir  
 « Il m'a dit de ne pas venir, mais je suis venu ».

4b)- **koat prap kʰəjəm mən ʔəj mək taɛ kʰəjəm mək**  
 il dire je **mən-ʔəj-**venir- seulement je venir  
 « Il m'a dit de ne pas venir, mais je suis venu ».

5a)- **baɜ caŋ kəm ʔəj ke: tiʔtɪn trɜʔ tʰɛ: ʔəj dɔ:c ke:**  
 si-vouloir- **kəm-ʔəj-** gens critiquer devoir faire donner comme gens  
 « Si tu veux que les gens ne te critiquent pas, il faut que tu fasses comme les autres ».

5b)- **baɜ caŋ mən ʔəj ke: tiʔtɪn trɜʔ tʰɛ: ʔəj dɔ:c ke:**  
 si-vouloir- **mən-ʔəj-**gens-critiquer-devoir-faire-donner-comme-gens  
 « Si tu veux que les gens ne te critiquent pas, il faut que tu fasses comme les autres ».

Dans (4a et b) et (5a et b) la différence entre **kəm** qui pose ‘valider p’ (p = ‘ne pas venir’ / ‘ne pas critiquer’) et **mən** qui pose « ne pas valider p (p = ‘venir’ / ‘critiquer’) » est faible. La différence doit être cherchée dans la position du locuteur concernant p (ou p’) : avec **kəm** le locuteur considère que ‘ne pas venir / ne pas critiquer’ est la bonne valeur, alors qu’avec **mən** il occupe une position neutre (en (6b) il considère qu’a priori les critiques sont justifiées). Ce point est confirmé par le blocage de **kəm** dans (6a) et la possibilité d’avoir **mən** dans (6b) :

6a)- \* **baɜ kəm caŋ tɛi trɜʔ prap ke: mun**  
 Si **kəm** vouloir aller devoir dire gens avant  
 6b)- **baɜ mən caŋ tɛi trɜʔ prap ke: mun**  
 Si **mən** vouloir aller devoir dire gens avant

« Si tu ne veux pas y aller, il faut prévenir avant ».

Pour le locuteur c’est la non validation de ‘vouloir aller’ qui est en jeu et non la validation ‘ne pas vouloir aller’.

### 3. Constructions de la forme **kəm<sub>1</sub> p kəm<sub>2</sub> ʔəj q**.

Il existe une construction avec deux occurrences de **kəm**, la seconde étant suivie de l’indéfini **ʔəj**.

7) **kəm<sub>1</sub> kʰəjəm mək taon kəm<sub>2</sub> ʔəj ke: ʔaj baek muk bat haɜj**  
**kəm** je venir à temps **kəm** ʔəj -on- frapper casser visage disparaître déjà

« Je ne serais pas arrivé à temps, on t’aurait (déjà) cassé la figure »

Le locuteur reconsidère sur un mode fictif (irrealis) un événement où son intervention a sauvé l’interlocuteur ; pour sa démonstration il envisage ce qui se serait passé s’il n’avait pas été là : **kəm<sub>1</sub>** met en avant p’ (‘ne pas venir’). **kəm<sub>2</sub>** est suivi de l’indéfini **ʔəj** qui peut être employé pour disqualifier la proposition qui précède<sup>2</sup>. Dans (7) **ʔəj** après **kəm<sub>2</sub>** signifie que la sélection de q’ (‘ne pas frapper’) que pose **kəm<sub>2</sub>** n’a aucun sens dans le cadre de l’hypothèse de la ‘non venue’ (**kəm<sub>1</sub>**). Ici encore **kəm** sélectionne respectivement p’ et q’.

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<sup>2</sup> Exemple : A : - **ʔat tɛi riɜn tɛ: tʰəj nɜŋ** B : - **tɛi ʔəj tʰəj ʔa:tɜt nɜŋ**

Nég aller apprendre part. jour déict. aller- ʔəj-jour-dimanche-déict.

« A : Tu ne vas pas à l’école aujourd’hui ? - B : Pourquoi veux-tu que j’aille à l’école, on est dimanche ! »

Dans la réponse de B la présence de **ʔəj** après **tɛi** (‘aller’) signifie que ‘aller à l’école’ n’a aucun sens.

## The aspectual properties of predicates with implicit arguments

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There is a tight connection between the count/mass distinction in the nominal domain and the notion of actionality in the verbal domain (cf. Bach (1986)). In a nutshell, verbs that denote activities have a linguistic behaviour similar to nouns that express mass terms; verbs that denote accomplishments are on a par with countable nouns. Even more directly, if a verb like *eat* has a direct object a singular or a (definite) plural count noun (cf. (1)), it belongs to the class of accomplishment verbs (i.e., it has a *telos*, a culminating point, that, in this case, corresponds to the consumption of the direct object itself); if the direct object is a mass noun or a bare plural (cf. (2)), the final result is an activity predicate:

- 1) Leo ate an apple / three apples in 10 minutes / \* for 10 minutes. *Accomplishment*
- 2) Leo ate soup / apples for 10 minutes / \* in 10 minutes. *Activity*

Many verbs (e.g., *eat*, *read*, *drink*...) show an alternation between transitive and intransitive versions, and from an aspectual point of view it is usually claimed that the intransitive versions denote activity verbs (cf. (3)). Nevertheless, there are contexts (cf. (4)) in which they behave as accomplishments:

- 3) Leo ate for an hour / \* in an hour.
- 4) Yesterday I had lunch with Leo, and he ate in an hour.

My goal is to clarify the nature of the implicit object of this class of verbs, and in particular to explain their aspectual properties. The first question is how to interpret a sentence with an understood argument, like (5). Bresnan (1978) proposed a lexical mapping rule that interprets it as equivalent to (6) (cf. also Dowty (1982) “Unspecified Object Deletion” rule):

- 5) Leo ate.  
 $\exists x \text{ ate}(\text{Leo})(x)$
- 6) Leo ate something.

The equivalence between (5) and (6) is nevertheless problematic once we consider sentences with scope-bearing elements (*everyone ate* is incorrectly predicted to have an interpretation in which *there is something that everyone ate*, cf. Fodor & Fodor (1980)) and once we take into account the verb actionality, since (5) corresponds to an activity predicate, whereas (6) is an accomplishment, as noted by Mittwoch (1982).

My starting point is the analogy between verb aspectual classes and the count/mass distinction. Following Chierchia (1998), I assume that, in general, predicates refer to individuals  $u$  that belong to the domain of quantification  $U$ ; this domain of discourse is structured in a semi-lattice closed under the join operation  $\mathbf{U}$ : that is, it contains a set of atomic individuals, and the sets that can be formed by summing the atomic individuals. Singular count nouns pick up their extension only from the set of singularities (i.e., atoms). Plural count nouns refer to pluralities (i.e., sums of atoms). This is obtained by assigning to the plural morpheme an operation that maps a set of atoms into the set of pluralities constituted by these atoms:

- 7) For any  $A \subseteq U$ ,  $\text{PL}(A) = *A - A$   
where  $*A$  is the closure of  $A$  under  $\mathbf{U}$ , i.e., the set of all sums of elements of  $A$

Chierchia views mass nouns as inherently plural, i.e., as referring to a  $\mathbf{U}$ -closed set of atoms.

Coming back to the transitive / intransitive alternation, my idea, roughly, is that what stands for the internal object of the intransitive versions of verbs like *eat* is inherently plural. The final paraphrase of a sentence like (5) is not, in my view, equivalent to (6), but to:

- 8) There is a contextually determined set of things / portion of stuff that Leo ate.

This interpretation is derived in a way somehow analogous to the way in which sentences with “positive” gradable adjectives are interpreted. An influential approach (cf. Kennedy (1999) and references therein) assumes that gradable adjectives as *tall* denote a function that applies to an individual and gives as output a degree  $d$  in the scale of tallness. Such a degree  $d$  needs to be interpreted; if it is used in its positive form, as in “Leo is tall”, it is assumed that there is a null degree morpheme POS that introduces an existential quantifier with an implicit restriction variable to bind the degree argument of the adjective:

$$9) \quad [[\text{POS}]] = \lambda G \lambda x \exists d (\mathbf{C}(d) \ \& \ G(d)(x))$$

Applying this null POS operator to *tall* in a sentence like “Leo is tall” renders it equivalent to “Leo’s height exceeds the contextually determined standard degree”.

My idea is that something similar happens when a verb like *eat* is used in its intransitive versions. In this case, the “degree variable” that needs to be interpreted refers to the unexpressed theme of the verb (i.e., what is eaten). And this “variable” receives its value via a  $\text{POS}_v$  operator that asserts the existence of a contextually determined “quantity of things that are eaten”. What is crucial is that we are talking about a quantity of (plural) things or of stuff eaten, and this can be obtained by requiring that the contextual restriction forces the variable to range over a set that is obtained by U-closure over the relevant set of eaten things. It is from this set of pluralities of things that constitute the theme of the verb that the contextual restriction  $\mathbf{C}$  selects a subset of pluralities that may be the null argument. Thus, starting from (10) as the meaning of transitive *eat*, I assume that the intransitive version calls for the  $\text{POS}_v$  operator, whose semantics is given in (11), with the contextual restriction defined in (12), and the final result is (13).

$$10) \quad [[\text{eat}]] = \lambda e \lambda x \lambda y. \text{eat}(e) \ \& \ \text{TH}(x)(e) \ \& \ \text{AG}(y)(e)$$

$$11) \quad [[\text{POS}_v]] = \lambda G \lambda e \lambda y. \exists q [\mathbf{C}(q) \ \& \ [G(e)(q)(y)]]$$

$$12) \quad \mathbf{C} = \lambda q. q \in \bigcup [\lambda x. G(e)(x)(y)] \ \& \ q \text{ is contextually relevant}$$

$$13) \quad [[\text{Leo POS}_v \text{ eat}_{IV}]] = \lambda e. \exists q [\mathbf{C}(q) \ \& \ [\text{eat}(e) \ \& \ \text{TH}(q)(e) \ \& \ \text{AG}(\text{Leo})(e)]]$$

The semantics of the  $\text{POS}_v$  operator provided in (11) does not specify how the contextual restriction  $\mathbf{C}$  selects the quantity  $q$  that represents the implicit object of the verb. In fact, there are two different ways that  $q$  can be chosen amongst the set of pluralities that constitute the possible argument of the verb: it could be a (not specified) subset of the pluralities of objects, as in (11a), or it could be identified with a particular quantity  $q$ , as in (11b)

$$11a) \quad [[\text{POS}_v^1]] = \lambda G \lambda e \lambda y. \exists q (q \subseteq \mathbf{C} \ \& \ G(e)(q)(y))$$

$$11b) \quad [[\text{POS}_v^2]] = \lambda G \lambda e \lambda y. \exists q (q \in \mathbf{C} \ \& \ G(e)(q)(y))$$

Intuitively, these two possibilities correspond to the two different readings illustrated by the examples in (3) and (4): in (3) the understood argument of the verb is left unspecified – this is captured by the entry in (11a), that interprets the implicit object as a bare plural or a mass noun; on the other hand, the scenario introduced for (11b), on the other hand, suggests that the null argument of *eat* refers to a precise quantity, the lunch, and this is captured by viewing  $q$  as one particular (even if not identified) combination of the possible pluralities of things eaten. This renders  $q$  equivalent to a countable, definite plural. Thus, the aspectual properties are straightforwardly derived: resorting to the  $\text{POS}_v^1$  operator renders the predicate an activity; the use of the  $\text{POS}_v^2$  operator renders it an accomplishment.

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## Infinite actionality: Aktionsart values of –p-converbs in Tuba

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One can take for granted the existence of a special parameter of situations and, as a consequence, of situation-denoting verbal stems, named inner aspectuality, or actionality, Aktionsart, etc, and describable as a characteristic of the temporal development of a situation, that is, its telicity, stativity, punctuality etc (Dowty 1979, Smith 1991, Tatevosov 2002). This characteristic of a predicate can be changed via special grammatical means, e.g. English verbal particles (Ramchand, Svenonius 2002) or Slavic Aktionsart affixes (Filip 2003, Ramchand 2004). However, verbal actionality can as well be altered by other, non-specific derivational processes, and this is the case under discussion here. This paper deals with verbal actionality in Tuba (Altaic, Turkic), and with its changes in infinite form of –p-converb (as a head of subordinate predication). My database consists of 48 verbs and examples of their use.

Following Tatevosov 2002, I will represent the aspectual characteristic of a verbal stem as two sets of basic aspectual meanings (State, Process, Multiplicative process, Entry into a state, Entry into a process, or simply S, P, MP, ES and EP), one set describing meanings available for a simple perfective form (Preterit), the other for a simple imperfective one (Simple Present). E.g., verb *čij*- ‘to write’ will have aspectual characteristic ES P, P, this means that its past tense form can denote telic situation ES (‘the boy wrote a letter’) and an atelic P (‘the boy has been writing a letter’), while its present form refers to an atelic P (‘the boy is writing a letter’). This inventory permits to tell how the range of aspectual meanings available for verbs and their forms differ from one another.

The default and most expected situation is one-to-one correspondence between the sets of aspectual meanings available for a verb in its finite and infinite forms. The converb under discussion can refer both to a preceding situation and to a simultaneous one (with respect to the situation denoted by the main verb); in the default case the range of aspectual meanings of a converb with the preceding interpretation is the same as the range of aspectual meanings of a perfective finite form, while the set of aspectual values of a converb under simultaneous interpretation is the same as the one for the same verb in imperfective finite form. That is, the time interval occupied by the situation described with the main verb is in some sense an equivalent of the observation interval for finite verbal forms.

However, exceptions are possible: there are cases when a converb has an aspectual meaning unavailable for the same verb in finite form, and cases when a converb lacks an aspectual meaning attested for a verb in finite form. Here are several latter cases.

1. Lack of processual meaning under preceding interpretation of the converb is attested for verbs *qajna* ‘to boil’, *syn* ‘to break (intrans.)’, *al* ‘to take’, *qyr* ‘to come in’ и *ül* ‘to die’. All these verbs denote processes and telic entries into a state in the finite perfective form and processes in the finite atelic form (i.e., they belong to the ES P, P aspectual class), while their converbs refer to either preceding telic ES, or to a simultaneous process, therefore preceding processual interpretation is lost. This is not the case for all the verbs of the same aspectual class: *ač* ‘to open’, *tal* ‘to tear’, *niin* ‘to wash’, *kel* ‘to come’, *ot* ‘to break’, *pastux* ‘to pasture’, *to* ‘to feel cold’, *t’e* ‘to eat’, *čij* ‘to write’ and *cyq* ‘to go out’ preserve preceding processual interpretation in the converb form. One can notice that the interpretation is preserved in manner verbs (in the sense of Rappaport Hovav, Levin 1998), and in those result verbs, which allow for the changes in Object to not to be parallel to the activity performed by the Agent. Verbs describing situations where the change in the Object is invariably parallel to the activity of Agent lack processual meaning in converbs under preceding interpretation.

2. Verbs *tište* ‘to bite’, *tut* ‘to hold’, *t’ul’a* ‘to get lost’, *undu* ‘to forget’, *uq* ‘to hear’, *kör* ‘to see’, *urta* ‘to sleep’ as converbs under preceding interpretation lack stative meaning, which is attested for the same verbs in perfect finite form. This meaning is however preserved by *ono* ‘to know, to understand’, *tur* ‘to stand’, *očor* ‘to sit’, *pol* ‘to become’, *qorqu* ‘to fear’, *küş* ‘to



love', *s'uj* 'to love', *d'at* 'to live'. This distribution can be summarized as follows: stative meaning under preceding interpretation is preserved by stage-level predicates (see Carlson 1977, Krifka et al. 1995) and by posture verbs, and is lost by all others.

Here are cases when a converb displays aspectual meanings not found in the finite form.

1. Both motion verbs in our sample, *teen* 'to run' and *üž* 'to fly' in the finite form belong to class EP P, P (see above), but as soon as they become converbs with preceding interpretation, they acquire new aspectual meaning, ES ('having arrived somewhere by running/flying, X started to sing'). Curiously, the same meaning with the same verbs can be found in one type of serial converb construction, which demonstrates extremely diverse results on various types of verbs (e.g., we found no other verbs where it would add ES aspectual meaning).

2. Verbs *tap* 'to find' and *t'ul'a* 'to get lost' in converbs with simultaneous interpretation acquire meaning of Process ('is seeking for something' and 'is going to get lost') which they do not have in the imperfective finite form.

I would suggest different explications for the cases of loss of aspectual values in converbs and for the cases of acquiring them. The latter are so peculiar and rare, that it could be the best decision to attribute them to a lexical property of the corresponding verbs, namely, my hypothesis is that they are allowed by the lexical meaning of the verb, but are for some reason blocked in the finite form (cf. the problem of indirect access as described in Zucchi 1999, Kratzer 2002). Converbs have less structure, therefore less blocking.

As for the cases of loss of aspectual meanings in converbs, they can be viewed as different realizations of the following general principle: if a converb has preceding interpretation, the situation it denotes should finish before the start of the situation denoted by the main verb, in other words, the two situations should be incompatible on the same time span, with the first one setting the ground for the second, creating some result which can be a basis or the situation denoted by the main verb. This is true for the stative part of meaning of individual-level predicates and posture verbs: having lived somewhere or having sat somewhere is more likely to create a result and change something in a subject, than, say, having hold something. The same is true for the processual part of meaning of manner verbs and verbs where changes in Object are not necessarily parallel to the activity of Agent: in this case lexically-specified activity of the Agent or the impulse of change accumulated in the Object can also be a result.

In any case, this data show that converbs are different from finite verbs with respect to how they let us see the aspectual potential of a verb.

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## Syntax-Pragmatics interface in converbal constructions

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This paper provides a formal analysis of the syntax, morphology, and information-structure of converbal constructions in Sakha. No previous account formally addresses this kind of grammar fragment in any of the languages that have converbs. Converbs are non-finite verb forms which indicate adverbial subordination (Haspelmath 1995). Our evidence is drawn from Sakha (Turkic), a head-final, suffixing language with basic SOV word order.

In Sakha, nine types of converbs are formed based on a verb stem and a suffix (e.g. *-An*, *A:rI*, *-BIc:A*). The suffix carries an inherent semantics of anteriority, purpose, cause, etc. Converbs occur in two syntactic realizations: 1) they project a subjectless phrase in which the subject is co-referential with the subject of the modified finite verb; 2) they project a sentence with an overt subject which is independent of the finite verb's subject. The lexical rule responsible for capturing the derivation of converbs is non-deterministic, and allows for both kinds of converbs. In turn, the phrases that these expressions project are assumed to adjoin to VPs headed by a finite verb. These rules are left out due to space limitations.

One of the noteworthy properties of converbs is their ability to occur in chaining constructions, where converbal clauses are stacked one after the other to advance the narration (Nedjalkov 1995), as in sentence (1). Bickel (2006) claims that there are cross-linguistic occurrences of constructions (e.g. Belhare, Nepali), where the scope of the interrogative marker in the main clause is indeterminate: depending on the context, the sentences can be interpreted as having conjunct or disjunct scope. Similarly, the chaining constructions in Sakha show variation in extent of the illocutionary scope of a sentence. According to data and native speakers' judgement, the variation depends on the information-structure of a sentence, i.e. a placement of focus in a sentence. Example (1) has three converbs that modify a finite verb *okhtubuta*. The scope of a question operator *duo* extends up to a verb in focus. When *takhsaat* is in focus, a whole sentence is questioned. When *kuotaary* is in focus, the action of someone exiting a house is presupposed. When *innen* is in focus, the action of exiting a house and attempts to escape are presupposed. The fourth interpretation is derived when *okhtubuta* gets focus, in which case all of the actions described by the converbs are presupposed and the action described by the finite verb is questioned.

- (1) *Kini [djietitten takhsaat<sub>foc</sub> [kuotaary<sub>foc</sub> maska [innen<sub>foc</sub> [okhtubuta<sub>foc</sub> duo]]]]?*  
 3sg.NOM house.ABL exit.CVIMM escape.CVPURP tree.DAT trip.CVANT fall.PST.3sg Q

'Did (s)he fall as soon as having come out of a house, trying to escape, and having tripped over a tree?'

'As soon as having come out of a house, did (s)he fall trying to escape and having tripped over a tree?'

'As soon as having come out of a house, & trying to escape, did (s)he fall down having tripped over a tree?'

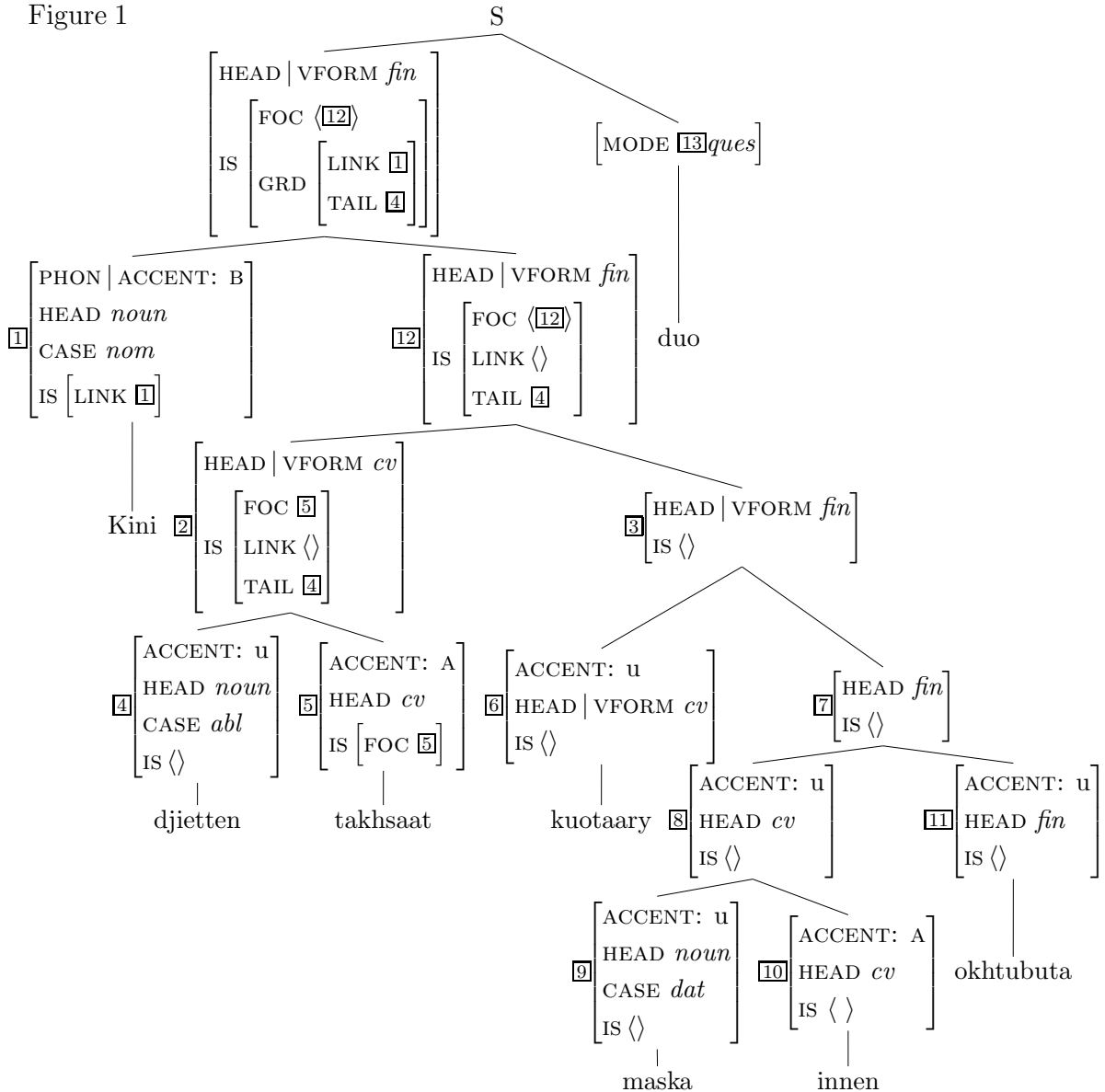
'As soon as having come out of a house, trying to escape, & having tripped over a tree, did (s)he fall down?'

This paper provides a general mechanism for capturing the phenomenon of mood and information-structure interaction in sentences with converbs. The analysis of the information-structure, couched on Head-Driven Phrase Structure Grammar (HPSG), is drawn from (Engdahl et al. 1996). Although this analysis was meant to capture information structure of English and Catalan sentences, it can, with few modifications, be applied nicely to the Sakha sentences. In (Engdahl et al. 1996), the features FOCUS and GROUND represent new and old information respectively. The latter introduces two other features: LINK (which establishes a particular locus of update in the input information state) and TAIL (indicating that a non-default mode of update is (in the speaker's eyes) required at the point of discourse). (Engdahl et al. 1996) assume that there is a mapping between a word's accent and the information-

structure and suggest the constraint where every word either has an accent A (a high-pitch accent in Sakha) denoted as ‘focus’ or an accent B (a falling accent in Sakha) denoted as ‘ground’|‘link’ or an accent ‘unmarked’ with no value. The principle of information-structure (IS) assignment, given below in informal format, is based on (Engdahl et al. 1996).

- the IS of the mother node is the concatenation of the daughters’ ISs and (if the daughter occurs with focus) tail is assigned to daughters without link; OR
- the IS of the mother node is the mother node itself if the most oblique daughter contains focus (by most oblique we mean the non-head daughter).

The application of these rules is given in Fig. 1, where the first interpretation of a sentence (1) (with *takhsaat* in focus) is analyzed as having a wide focus that maps with an extensive scope of the question operator. (Note: IS⟨ ⟩ means FOC, LINK, and TAIL have empty *lists*.)



These rules ensure that the scope of the illocutionary operator extends only as far as a verb in focus and its complements. It also ensures that even though the scope of illocutionary scope may vary, a main clause is always found under the scope of illocutionary scope. These constraints hold in the Sakha chaining constructions with converbs and in various other languages that behave alike. Since this phenomenon is observed in other languages of the world, the suggested analysis for the mood and information-structure interaction may be cross-linguistically applicable.

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Bien que la formation du futur avec une forme tronquée du verbe *vouloir* soit considérée comme un trait morphologique partagé par toutes les langues du Sprachbund balkanique [Sandfeld, 1930], à savoir l'albanais, le bulgare, le grec et le roumain, ce phénomène n'est pas propre à ces langues. Son évolution morphologique et sémantique illustre bien le schéma proposé par Bybee & al. [1994] : « desire > willingness > intention > prediction ». Cependant la particularité du futur balkanique réside dans le parallélisme de son évolution diachronique dans ces langues [Assenova, 2002: 155]. Il s'y ajoute aussi le marquage aspecto-temporel des formes, ce qui rend plus complexe l'analyse des valeurs sémantiques du futur, fortement liées à leurs origines modales. Deux questions en découlent : peut-on traiter le futur des langues balkaniques de façon uniforme? L'étude du futur est-elle susceptible de modifier la ligne de partage que l'on observe entre l'albanais et le grec d'une part et le bulgare et le roumain, d'autre part?

L'albanais recourt à une seule forme pour l'expression du futur : le morphème *do*, forme tronquée du verbe *dua* fr. *vouloir*, est suivi du subjonctif présent introduit par *të* (fr. *que*), comme dans l'exemple suivant :

1. *Ç'do të bëni* ju sonte? "Vous, que ferez-vous ce soir?"

Au contraire, le bulgare et le grec présentent des systèmes morphologiques fortement aspectualisés impliquant deux constructions différentes : pour le bulgare, l'imperfectif (en 2) et le perfectif (en 3), et pour le grec moderne, les thèmes de l'aoriste (en 4) et du présent (en 5), formes accompagnées des désinences du présent.

2. *Ako si bogat, šte imaš* (imperfectif) *mnogo prijateli*. "Si tu es riche, tu auras beaucoup d'amis."
3. *No njama ništo po-strašno i po-silno ot čoveškata rāka. Tja šte napālni* (perfectif) *bombata s dinamit, tja šte ja zapali* (perfectif). "Il n'y a rien de plus redoutable et de plus fort que la main de l'homme. C'est elle qui remplira la bombe de dynamite, c'est elle qui la fera exploser."
4. *ópos strósis, tha cimiθís* (thème de l'aoriste). Comme on fait son lit on se couche."
5. *me stravó an cimiθís, to proí θ'aliθorízis* (thème du présent). "Si tu couches avec un aveugle, tu loucheras le lendemain" (traduit l'influence des mauvaises fréquentations)

Il a été souvent mis en évidence que le futur occupe une place particulière au sein de l'organisation du système temporel d'une langue (pour la discussion sur le classement du futur, cf. Hornstein, 1990; Sarkar, 1998) : un fait est envisagé comme fortement probable mais la possibilité de sa non réalisation n'est jamais complètement exclue.

En tenant compte des études morphosémantiques consacrées à la description du futur en grec et en bulgare [Tsagalidis, 1999; Guentchéva, 2001; Novakova, 2001], nous proposons d'analyser certaines valeurs sémantiques comme celle de la volonté, du possible, du probable ou du plausible dans le cadre de la théorie énonciative qui prend comme fondamentale la trichotomie aspectuelle état-processus-événement [Comrie, 1976; Lyons, 1977, Desclés, 1980, Mourelatos, 1981] et qui recourt à la topologie pour la représentation des valeurs sémantiques [Desclés, 1980 & 1994]. Le recours aux données des parlers balkaniques nous permettrait d'éclaircir le tissage des liens entre ces différentes valeurs modales. À titre d'exemple, on peut citer les parlers grecs de la Bulgarie qui ont conservé des formes

appartenant aux étapes antérieures de la formation de la particule du futur et montrent le lien entre la valeur de volonté et celle de possibilité ou de probabilité. Ou encore, on peut se référer aux données du valaque, variété daco-roumaine de Serbie, qui possède quatre formes exprimant des valeurs modales fortes qui touchent à l'épistémique, au déontique et au volitif. Ces données permettent de nuancer la prise en charge énonciative d'un fait s'inscrivant dans l'avenir. Le temporel est doublé de valeurs modales, certes, mais parallèlement, comme le montre l'exemple valaque suivant, la question aspectuelle aussi est souvent présente. En (6), *do-* est autant un préfixe qui traduit la notion aspectuelle d'achèvement mais peut également recevoir une interprétation modale. Par ailleurs, le présent/futur épistémique dans *va (do)pl'eca* « vont (finir par) partir » est autant modal que temporel :

6. *Va dopl'eca copiişca.* "Ces enfants vont finir par partir."

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## ***Podia* in Brazilian Portuguese: weak epistemic possibility and desire**

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This paper aims at attributing a semantic to *podia* in its epistemic use as a means of deriving an implicature of desire, which is characteristic of this modal auxiliary. It shows that although *pode* and *podia* in Brazilian Portuguese (BrP) express epistemic possibility, they are semantically distinct due to the presence of the “imperfective” morpheme *-ia*.<sup>1</sup> We shall argue that *-ia* conveys counter-factuality which indicates that the prejacent sentence is a weak possibility. From this we shall derive, via Gricean implicature, that the speaker’s desire is implied by *podia*. Besides clarifying the semantics of these two modal verbs in BrP, the paper also contributes to some theoretical issues, in particular we will claim that von Stechow & Gillies’ (2007) proposal is insufficient to explain the distinction between the two modal verbs, and that Iatridou’s (2000) approach to the semantics of imperfective morphemes can be improved if instead of the feature of exclusion we adopt Kratzer’s (1981, 1991, 2008) ordering source.

According to von Stechow & Gillies (2007) the epistemic use of *might* (which sometimes translates as *pode* sometimes as *podia*) reveals the speaker’s epistemic state: the prejacent proposition is compatible with the speaker’s epistemic state, i.e. there is, in his state of knowledge, at least one world in which the proposition is true.<sup>2</sup> This is clearly insufficient to distinguish *pode* from *podia*, since this description can be applied to both. Moreover only *podia* is felicitously used if it is common background that the speaker knows that *p* is the case or knows that non-*p* is the case:

- (1) Eu sei que João não está em casa, mas ele podia estar.<sup>3</sup>  
I know that João not is in house, but he podia to be.  
I know that João is not home, but he could be.
- (2) # Eu sei que João não está em casa, mas ele pode estar.  
I know that João not is in house, but he pode to be.  
I know that João is not home, but he might be.

Thus, *pode* implicates that the speaker does not know about *p* (if she knew, by Gricean reasoning, she should have said *p* and not something weaker as  $\Diamond p$ , a quantity implicature), whereas *podia* does not implicate anything about the speaker’s epistemic state. Felicity conditions differ because of the counterfactual element.

Counterfactuality, as we know from Stalnaker (1975), implicates that the situation expressed by the proposition goes against the facts. The future, thus, can only be non-factual. Both *pode* and *podia* can express a future situation, as exemplified in (3) and (4) below:

- (3) João pode se casar.  
João pode himself to marry.  
João may/might marry.
- (4) João podia se casar.  
João podia himself to marry.

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<sup>1</sup> These auxiliaries can also express other modalities, such as deontic, but we will focus only on epistemic uses.

<sup>2</sup> Notice that this does not preclude the speaker of knowing *p*, which is a desirable consequence, since if one knows *p* then *p* is possible.

<sup>3</sup> There is a play between known that non-*p* and *podia p*, on the one side, and knowing that *p* and *podia* non-*p*, on the other.

João could marry.

Only sentence (4) is ambiguous between a past interpretation – at some time before the utterance time it was a possibility that João marry –, and a “future” one – it is at the utterance time possible that João marries at some future time. In the future interpretation, the *-ia* morpheme is what Iatridou (2000) called a fake past/imperfective. Her hypothesis is that the imperfective morpheme carries the exclusion feature which may either exclude the utterance time, and we get a temporal interpretation, or it may exclude from the topic worlds the speaker’s actual world (this is how she manages to account for the fact that counterfactuality is an implicature). However, this approach cannot directly explain that in the future interpretation of (4) the speaker conveys that the possibility of João’s marrying is not very plausible; in a sense, the speaker conveys that she believes that it is not a very strong possibility. In order to get the weak possibility interpretation, we must compare possibilities. Moreover, out of the blue, the most ordinary interpretation attributed to (4) is that the speaker desires that João marries.

We propose that the imperfective morpheme organizes the worlds according to a contextual parameter (the “ideal” world), very much in line with Kratzer’s proposal (1981, 1991, 2008). In (4), worlds in which João does not marry are closer to the ideal worlds, i.e. the worlds that are normal (*ceteris paribus*), and probably the actual world is among them. Thus, the speaker conveys that according to what she knows it is slightly possible that João marries, because worlds in which he does so are not close to the normal ones. There is no ordering source with *pode*, thus in a sense it is “neutral” with respect to the occurrence of the situation expressed by the proposition.

If *podia* expresses a weak possibility, then why should someone utter something one believes it is not the case and there is little chance of it being so? Because she wants to express her desire.<sup>4</sup> This could be a conventional implicature tied to *podia*. The expression of desire is more prominent when it is discursively clear that the speaker knows that *p* is not the case. The conventional implicature solution seems to be better than two others: to consider that there are two *podia* in the BrP, an epistemic and a desire one; and to consider that desire is a modal base, as suggested by Kratzer.

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<sup>4</sup> From all we know this is not the case with *podia* in European Portuguese, but this is a topic to be further investigated.

L'investigation porte sur le système conditionnel du latin classique où l'on peut déceler deux matrices fondamentales au niveau syntaxique et sémantique :

Le Type A – celui où *si p* affirme une supposition probable ou éventuelle par rapport à une situation actuelle, passée ou prospective ou même par rapport à une situation qui se soustrait à toute référence temporelle. Ce type est construit, en grandes lignes, avec les différentes formes temporelles de l'indicatif. Le sujet parlant ne manifeste aucune prise de position par rapport à la véracité du contenu propositionnel asserté, mais, pourtant, il ne le réfute pas. D'où, la valeur *objective* des tournures de ce type.

Le Type B – celui du système hypothétique *subjectif* – construit avec le mode subjonctif et qui, à notre avis, peut être sous-divisé de la manière suivante : le Type B<sub>1</sub> – celui de la « fiction ouverte » (Lavency : 1999, 381), improbable, construit avec le présent, le parfait ou avec l'imparfait du subjonctif ; le Type B<sub>2</sub> – construit avec l'imparfait du subjonctif (il s'agit des tournures à valeur d'*irréel accidentel* [Martin : 1987, 17] qu'on note comme le sous-Type B<sub>2a</sub>) ou avec le plus-que-parfait du même mode (il s'agit des tournures à valeur d'*irréel essentiel* [Martin : 1987, 17], qu'on note comme le sous-Type B<sub>2b</sub>).

Sauf ces deux matrices fondamentales, le Type A et le Type B, il y en a en latin classique un autre paradigme syntaxique et sémantique, intermédiaire, le Type AB, où le sujet parlant considère *si p* : comme *probable* (les tournures du type : indicatif futur I / futur II, parfois le présent de l'indicatif, tant dans la protase que dans l'apodose), comme *possible* (les tournures du type : indicatif futur I / futur II dans l'apodose – subjonctif présent ou imparfait dans la protase) ou comme *faux* (les tournures réalisées avec les différents temps du passé de l'indicatif et le subjonctif imparfait ou plus-que-parfait, ces tiroirs fonctionnant soit dans l'apodose, soit dans la protase). À l'intérieur du Type AB, le sujet parlant exprime soit une *supposition probable*, soit une *hypothèse* / une *supposition possible*, soit un *irréel accidentel*.

Par conséquent, le grand nombre des matrices constitutives du système hypothétique du latin classique conduit, inévitablement, aux confusions, au niveau discursif les valeurs sémantiques tant du subjonctif, que de l'indicatif étant inépuisables. Mais cette complexité laisse s'entrevoir déjà une nécessaire simplification observable surtout dans les textes qui contiennent des épreuves de la langue parlée, populaire et où la tendance vers la non symétrie ouvre la voie au Type intermédiaire AB.

On retient donc la tendance de trouver de nouvelles formes morphosyntaxiques qui puissent remplacer celles poly-sémantiques et, en ce sens, certains tiroirs de l'indicatif, qui fonctionnaient déjà dans l'apodose, chargés avec des valeurs modales telles le *potentiel* ou l'*irréel* (voir l'imparfait de l'indicatif et les formes synthétiques du futur) vont s'installer aussi dans la protase du système conditionnel. En même temps, les auxiliaires modaux ou les périphrases construites avec le participe futur et le verbe *esse* préfigurent les deux voies explicites du remplacement du subjonctif présent à valeur du potentiel. Toutes ces modifications au niveau formel ne restent sans aucun écho au niveau sémantique où, en grades lignes, est évidente la tendance de faire restreindre la zone du *possible* en faveur de celle du *probable*.

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**Creole reflexes of English *do*:  
zeroing in on tense, aspect and modality in Vincentian creole**

In this study, we focus on St Vincent and the Grenadines, where the descendants of the colonised population continue to speak a creole that has been heavily influenced by the English lexicon. The variables we elect to investigate are all related in form, though not in function, to Standard English *do*. Indeed, the reflexes of English *do*, which are attested as *duhz*, *did* and *duhn* in Vincentian and other creole varieties, have elsewhere been accounted for as archaic English forms that were acquired by Africans in the Caribbean in general as a result of vigorous acculturation processes initiated by British settlers (Alleyne 1980: 183).

Our analysis reveals that the morphemes are more than just archaic reflexes of the English morpheme. As a rule, the emphatic trait of English *does* was lost during its transmission over to the creole, where it marks habitual aspect, often with an underlying generic value. This is illustrated in (1).

(1) *Wan-wan duhz fol baaskit.*

One-one does full basket

‘Little by little things get done.’

By the same token, the creole remote past marker *did*, typically used in mesolectal utterances like (2), is unstressed unlike its formal English counterpart.

(2) *Yes Seira, evriting did duhn sain an siil an dileva.*

Yes Sara, everything did done sign and seal and deliver

‘Yes Sara, everything had been signed, sealed and delivered.’

While utterance (2) also illustrates the aspectual function of *duhn*, reminiscent of the completive semantics of English *done*, a close analysis reveals that *duhn* cannot be accounted for merely as a marker of completive aspect, contra Winford (1993: 49), among others. In Vincentian creole, only its combination with dynamic verbs affords it the completive reading. Associated with stative verbs (3) and adjectival predicates (4), *duhn* establishes inception and continuation of a situation rather than aspectual closure (in Chang & Timberlake’s 1985

terms) since in these environments, there is absolutely no information about endpoints of the situation.

(3) *Dem duhn no laik hau aawi no nau.*

Them done know like how we know now.

‘They know now what we know.’

(4) *Shi duhn lang an taal aredi se shi a wei hai hiil*

She done long and tall already say she prog wear high heel

‘She is already very tall, yet she is wearing high heels.’

Drawing from the intricate interplay of temporal, aspectual and modality properties observed in the behaviour of these *do* related morphemes, we claim that the semantic characteristics of these morphemes are highly structured. Furthermore, we demonstrate that speakers of this New World English variety did not randomly create new functional markers. Instead, they retained what was already at work in other linguistic systems that were in contact and restructured them. At the base, these “borrowed” morphemes lent themselves to semantic and functional transfers.

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## Anchoring with Tense and Modals

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**1. Introduction.** Recent work on the functional sequence of the clause has argued for a finer articulation of functional categories in the inflectional domain, on the basis of morphological and semantic facts across languages (Cinque 1999). Consider the fleshed out hierarchy proposed by Cinque: ModP epistemic > TP (Past) > TP (Future) > MoodP irrealis > ModP alethic > ... ModP volitional > ... TP (Anterior) > ... AspP retrospective > ... AspP prospective > ModP obligation > ModP permission/ability. This hierarchy claims that epistemic modality sits in a position above PAST and FUT, while other kinds of root modality appear below. In this paper, I revisit the puzzles posed by the interpretation of tense morphology on modals, and of the interaction between modal and perfect auxiliaries in Germanic. I will argue specifically that under the right construal of tense morphology and perfect morphology, mismatches between morpheme order of auxiliaries and semantic interpretation disappear.

**2. Two Puzzles:** Consider the following English sentence below, which contains both a modal and a perfect auxiliary. As noted in the literature, these sentences are ambiguous between an ‘epistemic uncertainty reading’ and a ‘counterfactual’ reading.

- (1) John could have won the race.
  - (a) .... let’s go and find out. (Epistemic Uncertainty reading)
  - (b) ....at that point, but he didn’t in the end. (Counterfactual reading)

Recent accounts, such as Condoravdi (2001) and Demirdache and Uribe-Etxebarria (2005) assume that in addition to an Event time for the non-modalized proposition, there is also an open interval MOD-T whose initial boundary is set by tense, and which extends indefinitely into the future. The relation to the aktionsart of the embedded proposition is captured by the stipulation that the modal interval includes the event time for eventive predicates but overlaps with it for stative predicates. The claim is that the initial time point of the MOD-T can be shifted backwards if the perfect operator moves to scope over the modal, giving rise to a counterfactual reading.

MOD > PERF (epistemic construal); PERF > MOD (counterfactual construal)

Under this kind of story, it is accepted that the surface order in (1) involves a mismatch between morphology and the semantics, which is repaired either by movement in the syntax, or in some semantic component. Note that in Demirdache and Uribe-Etxebarria (2005), in English modals themselves are explicitly claimed to be tenseless, unlike their Romance counterparts. We already know that modals in English are morphologically fairly impoverished compared to their Romance (see also Laca 2008) and even other Germanic counterparts. Even in English however, the counterfactual reading is only possible with those epistemic modals that have ‘moribund’ past tense morphology.

- (2) (a) John could/might/should have won the race. (ambiguous)
  - (b) John must/may have won the race. (unambiguous)

if the account employing scope reversal is to generalize, it needs to explain the correlation between inverse semantic scope and the past tense morphology, *in addition to* the cooccurrence with the perfect auxiliary.

The second puzzle involves the fact that modals in English are sensitive to the aspectual value of their preadjacent proposition in different ways: I show that moribund tense morphology modals *should*, *could* and *might* allow an epistemic reading even for dynamic verbs, but *must* only allows an epistemic reading for states (either lexical or derived). The solution to both puzzles will involve taking seriously the ‘past’ morphology as it appears on certain modals and giving a compositional and uniform account of it. This will involve some modifications of the model, as it is currently understood.

**3. Analysis:** The analysis I propose makes use of two main inputs to modal interpretation, the Modal Reference (MR) and the Modal Base (MB). The Modal Reference is defined as the  $\langle w, t \rangle$  perspective from which the modal base is accessed; the Modal Base is the set of alternative worlds that form the restrictor for the quantificational force of the modal, which are accessible from the MR, given the lexical content of the modal in question. The modal's prejacent proposition (term taken from von Stechow 2005 and von Stechow and Iatridou 2007) is the proposition that the modal directly combines with, and it in turn has its evaluation time, although I will assume that the prejacent evaluation time is not directly specified by tense morphology, but is entailed as a consequence of the choice of modal base. The analysis crucially makes use of the idea in Iatridou (2000) (see also Isard 1974) that past tense morphology is not a primitive tense category, but is one of the manifestations of the more general semantic category REMOTE:

•PAST morphology:

(i) REMOTE:  $t \neq t^*$  ( i.e.  $t < t^*$  ) or

(ii) REMOTE: Reference  $w \neq w^*$

•Modals are relations between time-world pairs, expressing a quantificational relationship between a reference world and at set of world alternatives at that point. The reference world can be bound/related to the anchor in Fin.

I follow recent proposals by Kratzer, who argues for a general ontological category of 'situation which contains both time and world variables in addition to the event. The vP builds up a complex situational description, with Aspect heads creating derived post-states (in the case of the perfect states) or on-going states (in the case of the progressive auxiliary). I will argue that the category of INFL has the role of expressing a relation between one of the deictically anchorable variables and an anchor located in Fin (following proposals of Enç (1987) in the tense domain). When the tense variable is selected for this purpose, the other variables are bound by default existential closure or independent deictic anchoring. The choice of  $t$  as anchoring variable is the standard case for tensed sentences and involves a relational operator in INFL establishing a relation of IDENT (Present) or REMOTE (Past) with the deictic anchor in Fin (the Utterance Time TU). Epistemic modality on the other hand, involves a different choice of variable as anchor— the world variable. In this case, the operator in INFL (here, the modal) establishes either an IDENT or REMOTE relation between the *Modal Reference* and the current speaker anchored world, time pair  $\langle w^*, t^* \rangle$ . Thus, the fixed element of the universal functional hierarchy is neither T nor  $\text{Mod}_{epist}$  but a more abstract category INFL which expresses a relationship between one or more of the situational variables and a deictic anchor. I propose, following Ritter and Wiltschko 2006, that the choice of this variable can vary from language to language (where they argue that HERE is the locational anchor for sentences in Halkomelem Salish).

Interpreting tense morphology on modals as an instance of the more general relator REMOTE, and interpreting the perfect auxiliary as a relation between situation types, I propose an analysis of modal sentences like (1) that does not involve a mismatch between morphology and semantics. I argue that in addition to their lexical content which constrains the modal base, and provides quantificational force, *could*, *should*, *might* in English contribute a REMOTE relation, while *MUST* contributes an IDENT relation over both times and worlds. I show that this allows us to explain the possibility of the counterfactual reading for the former but not the latter when the perfect is used. The ambiguity of the sentences with *could* etc. will be shown to derive from the possibility of interpreting REMOTE on *could* etc. as either locating the world variable or the tense variable. The fact that *must* contributes an IDENT relation over both worlds and times, also provides us with an explanation for why the epistemic reading for English *must* is confined to the very same prejacent propositions that are compatible with present tense in English. The theory I propose will have far-reaching consequences for the interpretation and role of INFL in the functional sequence of the clause, specifically, that heads in the inflectional domain are more abstract than assumed in the Cinquean paradigm, and the epistemic modality is in complementary distribution with tense anchoring.

## The building blocks of second language Actionality: telicity in L2 Italian

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**1 Background and resume** Psycholinguistic and emergentist theories (e.g. Andersen and Shirai, 1994; Li and Shirai, 2000) assume that L2 learners are cognitively equipped to distinguish telic predicates from atelic ones since they are able to record implicitly the skewed patterns of form/meaning mappings (perfective/telic vs. imperfective/atelic) found in the target input. In the UG perspective, Slabakova (2001) agrees that an 'actional blueprint' for the telic/atelic distinction exists in terms of parameters that need to be set up to the right value by L2 learners. These parameters of telicity are semantically motivated and syntactically encoded. Slabakova adopts Travis' account (Travis 1999; in press) according to which the four Vendlerian Actional classes are not considered as low level projections of the lexical head V (as in van Valin, 1990; Dowty, 1991), but as syntactically realized semantic primitives which are headed within  $V_1$  and  $V_2$  in the  $\nu P$ -shell projection. Both these approaches: (a) consider the telic/atelic distinction as a semantic language universal; (b) encode separately Actionality and (grammatical) Aspect in the tree; (c) distinguish (in XP projections) between arguments and adjuncts: only the former - and not the latter - are relevant for the local computation of Actionality. By generalizing some observations about how American and Spanish learners of Italian attempt to add the [+telic] feature to the underspecified motion verb *andare* 'go', I claim that conditions (a), (b) and (c) - despite being useful for the purpose of describing mature languages - are too strict to account for learner data. I propose that telic/atelic opposition - as long as the value of a single parameter has not been set again by these learners (§6) - can be at times semantically demotivated ('bleached') and accounted for just looking at how learners use aspectual morphemes and adjuncts in a non target-like manner.

**2 The building blocks of L2 telicity** Data from Italian learner corpora (Rastelli, 2008) suggests that learners sometimes (i) use the temporal/aspectual [+Perf.] morpheme in order to add telicity to atelic or actionally underspecified verbs of motion; (ii) upgrade XP complements (AdvP and PP) to the rank of external arguments (at Asp<sup>1</sup> SPEC position in fig. 2). A possible explanation of (i) is that learners - despite being aware of the difference between Tense and Aspect - blur the distinction between *telicity* and *boundedness*. A possible explanation of (ii) is that learners try to gear the Actionality of underspecified (typologically 'basic', according to Viberg, 2002 or cognitively basic according to Goldberg 1995) verbs of motion towards a telic interpretation. I hypothesize that (i) and (ii) may work as the 'building blocks' of telicity (as to motion verbs in L2 Italian at least).

**3 Experiment design** The hypothesis (§2) was tested as follows. Subjects: 197 undergraduate students of L2 Italian spending one semester abroad in Milan. Breakdown: 85% L1 English and 15% L1 Spanish (50% beginner, 25% intermediate, 25% advanced). Timed task (15 min.): write an 80-100 words paragraph to describe one scene of the film 'Pane e tulipani' (see fig.1). Conditions: free to use either the Past or the Present Tense. No dictionary allowed. No check. Control group: 43 native speakers of Italian. Independent variables: (i) L1; (ii) proficiency level; (iii) [±telicity] of the motion verb chosen to express frames 1 and 2 (fig.1); (iv) presence of PP or AdvP to express the goal of motion. Target variable: correlation between values of (iii) = [-telic] and (iv) = yes.

**4 Results** 32 subjects out of 197 (26 L1 English, 6 L1 Spanish; 12 advanced, 7 intermediate, 13 beginner), which know and use in the same paragraph inherently telic motion verbs (such as *uscire* 'exit', *arrivare* 'arrive' and *partire* 'leave'), favor the underspecified *andare* 'go' to mean the [+Risultative] phase of the woman 'being outside'. Within this group, (at  $p < .05$ ) the choice of *andare* has a negative correlation with students' L1 and proficiency level. Rather, the choice of *andare* shows a strong positive correlation (Pearson  $r = 0,817$ ) with the presence of either the [+Perf] morpheme and the preposition *a* 'to' or the adverb *fuori* 'outside' like in sentence (1):

- (1) quando è      **andata**   **fuori**   vede   che il   suo autobus è      **andato**   **in via**  
when is-AUX gone-PastP out   sees-PRES that the her bus is-AUX gone-PastP in away  
'when she exits she sees that her bus has left' [L1 English]

Note that: (a) English and Spanish codify motion verbs differently in their L1s (for V-frame vs. satellite-frame distinction see Talmy, 1985); (b) none in the Italian control group chose this configuration because *andata fuori* 'gone out' does not necessarily mean that the woman is already 'being outside'.

**5 Discussion** To overcome restriction (b) (§1), I assume that - when a L2 verb of motion has a telic interpretation - the Asp projection in the lexical domain may host the inflected perfective morpheme (\*to/ta/ti/te = '-ed') (checked in Asp<sup>II</sup> Spec position) which is usually excluded from the local computation of Actionality. To overcome the restriction (c) (§1), I assume that Asp may occasionally host raised PPs and AdvP (whose landing site is Asp<sup>I</sup> SPEC position), to signal that the resulting phase of event - despite not being incorporated in Lexical Conceptual Structure of V - is the (pragmatically) relevant dimension for the correct interpretation of the event (Moens, 1987) (fig.2).

**6 Features checking and L2 Actionality** In their L1s, both English and Spanish check the morphology of Present Perfect and that of *Preterito Perfecto* (which are only formally similar to the Italian *Passato Prossimo* they used in sentence (1)) in an Asp node which is lower and distinct from T (they both are *perfectum praesens*, cf. Bosque and Demonte, 1999; Bybee, Perkins and Pagliuca, 1994). I assume that learners have to learn that: (x) in the *Passato Prossimo* the perfect and the perfective (aoristic) dimensions collapse; (y) the feature [+Past] is stronger than [+Resultative].

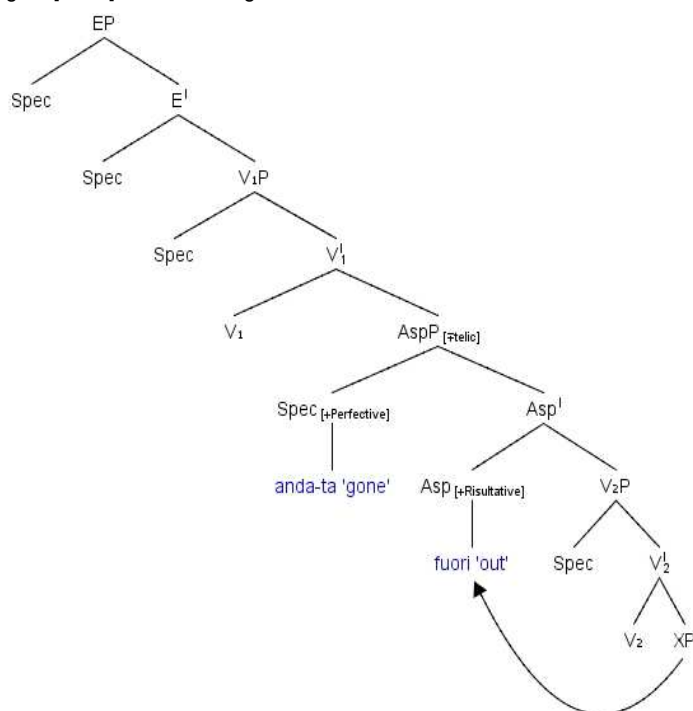
**7 Conclusion** Assuming that L1 values of T and Asp features in the initial state are not neutralized, weakened or valueless (Full Access/Full Transfer hypothesis), as long as L1 English and Spanish learners of L2 Italian don't check the morphology of the Italian *Passato Prossimo* against the [ $\pm$ Perfective][+Past] oppositions located in T, they are likely to alternate a non target-like structural representation of telicity (as in sentence 1) with its lexical encoding (whenever available) or to favor the former to the latter. Since L2 functional categories, overt morphological realizations and semantic features are learned altogether (Slabakova and Montrul, 2002) L2 telicity is likely to be expressed also by a tentative - though predictable - combination of morphological and phrasal features.

Fig 1 Frames of the scene described by the subjects



1 The woman realizes that none of her travel mates is in the Autogrill. 2 She exits the Autogrill and seeks around for her bus. 3 She realizes that the bus is leaving 4 She chases the bus.

Fig. 2: [ $\pm$ telic] and data fuori 'gone out' in L2 Italian



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## Semantic presuppositions and the German tense/mood system

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As is well-known, a past tense in English intensional past-under-past sentences does not necessarily denote a past tense but is anaphoric. [4] calls this embedded tense a *zero* tense which morphologically inherits the tense morpheme from the matrix tense but is semantically vacuous (see (1)). Lexically bound under an attitude, a zero tense denotes the holder's 'subjective now'. In English present-under-past sentences like (2), as reported by [2] (see as well inter alia [4] and [8]), we get a double access (DA) reading. DA readings arise because the present tense cannot be interpreted as zero tense because the matrix past feature does not agree with the embedded tense. Thus, the present tense has to be interpreted indexical and denote the present tense. This present tense is subjective, i. e. part of the holder's mental representation of the utterance time – a *de re* belief.

In German, in contrast, present tense embedded under a past tense in intensional contexts denotes the subjective now (cf. (3); there is anaphoric past-under-past in German as well). (3) does not have a double access reading like in English. A reasonable explanation is that what looks like present tense denotes a zero tense itself which can be bound under all tenses (cf. (4)). We analyze it as a zero form which corresponds to the default standard pronoun *he* since the present morphology is the 'weakest' tense permissible in finite clauses (cf. [4]).

The major issue of this talk is that factive predicates do not have a subjective-now reading for present-under-past in German as illustrated in (5). Instead, we get a double access reading (which is excluded if the present state – the pregnancy – cannot overlap the matrix event time). The present tense has to be interpreted indexical. This indicates that at least in German (but I suspect that it holds as well for English, but we cannot tell since we cannot tell apart co-indexed indexical past and anaphoric past under a past tense) factives do not select for intensionalized properties of times but for entities with an indexical tense.

[7] as well as [10] and [9] noticed that indicative mood under attitudes has to be interpreted as a zero mood. If it was indexical indicative mood, it would denote the actual world which it does not. Instead, we have to assume that indicative under *believe* is a zero mood which is bound by a lexical binder (which involves epistemic quantification), see (6). The English mood system seems to be more liberal than the tense system, since indicative under counterfactual mood may be interpreted as zero mood despite the lack of feature agreement (cf. (7)). This corresponds to the German data (for tense and mood, cf. (8)).

Back to factive predicates: (9) cannot be interpreted as epistemically quantified. Hence, it is an indexical mood – parallel to tense under factives. At first sight this is trivial, since it seems natural that facts are not subjective and that they are anchored to the actual world. The insight presented is that first, factivity is reflected in the mood/tense system as indexical tense/mood. Second, I claim that this indexical mood/tense is responsible for the presuppositional effect. Factive predicates select for clauses with indexical mood and tense. My claim is that semantic presuppositions are nothing else than not-asserted propositions (see for instance [1]) with indexical tense and mood. But I said 'proposition', but this is of course not correct. A factive complement denotes the *extension* of a proposition because mood is indexical. With reference to [6] and [3] and [5], I propose that extensions of propositions are facts, i. e. 'worldly' situations which exemplify a proposition. Under this assumption, the behavior of factive complements with respect to their tense and mood it is no longer a peripheral observation but is central for the discussion of semantic presuppositions because it follows naturally that non-asserted extensional clausal expressions denote facts.



## Examples

- (1) John thinks that it is 10 o'clock.  
[<sub>TP</sub> present 1 [<sub>t<sub>1</sub></sub> [John think that 1 [<sub>TP</sub> Ø<sub>1</sub> [it be 10 o'clock]]]]]
- (2) Peter believed that Anna is pregnant.
- (3) Peter glaubte, dass Anna schwanger ist.  
*Peter believed that Anna pregnant is.*  
'Peter believed that Anna was pregnant.'
- (4) Peter hatte geglaubt/wird glauben/glaubt, dass Anna schwanger ist.  
'Peter had believed/will believe/believes that Anna pregnant is.'
- (5) Anna verheimlichte (??vor 2 Jahren), dass sie schwanger ist.  
*Anna hid (2 years ago) that she pregnant is.*  
'Two years ago, Anna hid that she is pregnant.'
- (6) Peter beleives that Anna is pregnant.  
[<sub>TP</sub> indicative 1 [<sub>t<sub>1</sub></sub> [Peter believe that 1 [<sub>TP</sub> Ø<sub>1</sub> [Anna is pregnant]]]]]  
For all of Peter's doxastic alternatives <w,t> in w<sub>0</sub>: [<sub>λt.λw</sub>. Anna is pregnant in w](w) = 1.
- (7) Peter would surely think that Anna is/was/were pregnant.
- (8) Peter würde sicherlich denken, dass Anna schwanger ist/wäre.  
*Peter would surely think that Anna pregnant is/was.*
- (9) Anna würde niemals verheimlichen, dass sie schwanger ist.  
*Anna would never hide that she pregnant is.*  
'Anna would never hide that she is pregnant.'

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## ‘HIGH’ ANALYTICITY AND THE VERB-TENSE RELATION

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**1. THE ISSUE.** Baker (2002) presents a theory of building and merging for the structural relation between the verb and T(ense), i.e. the functional node in the syntactic representation that hosts tense morphology. The verb-tense relation is accomplished by *verb movement* (French V-to-T raising, cf. Pollock 1989) or by postsyntactic *merger* of the verb and the tense inflection under adjacency (English affix hopping, cf. Bobaljik 1995). These are the only two options for the union of the verbal root with tense morphology. Baker’s theory predicts that T/Aux-S-V-O languages do not exist. When the tense particle (or an auxiliary verb) precedes the subject and the main verb in linear order, the verb fails to raise to T and remains inside the mittelfeld domain of the clause. Since the subject intervenes between the tense particle and the verb in T/Aux-S-V-O languages, post-syntactic merger is excluded as well. However, T/Aux-S-V-O emerges as the basic word order of Coptic Egyptian (Ancient Egyptian [Afro-Asiatic], 3<sup>rd</sup>-12<sup>th</sup> century CE). (1) features the perfect tense particle *a*, which is placed in front of the nominal subject *the she-camel* (*tə-kʲamaɣle*) and the verb *deliver* (*mise*).

- (1) Basic T-S-V-O order with perfect tense particle *a* (Mena, Miracles 10b, 33-34)
- |          |                    |             |                    |            |
|----------|--------------------|-------------|--------------------|------------|
| <b>a</b> | tə-kʲamaɣle        | <b>mise</b> | ən-u-seere         | ən-shime   |
| PERF     | DEF.F.SG-she-camel | deliver.ABS | PREP-INDEF.SG-girl | LINK-woman |
- ‘The she-camel delivered a daughter.’

Since the tense inflection and the verb stem appear on either side of the subject, the verb and tense are connected in the structure via a non-local feature matching procedure (long-distance AGREE(ment), *pace* Chomsky 2001).

**2. CENTRAL HYPOTHESES.** Coptic T/Aux-S-V-O order falls out naturally from the language’s parameter setting. The positive value of an analytic macroparameter manifests itself in a cluster of syntactic properties. The most salient property of the analytic morphological type is the division of labor between alternating verb stems, which, --due to the lack of tense and finiteness--, are defective verbal categories, and externalized tense/aspect particles in the extended projection line of the verb. High analyticity conspires with an uplifted position of tense, correspond structurally to the head of the FIN(inteness) P(hrase) in the Rizgian (1997) cartography. Due to the dissociation of the finiteness feature from verb stems, the VP domain no longer serves as a licensing domain for the subject and the direct object.

**3. VERB MOVEMENT AND SUBJECT RAISING.** As free functional morphemes, tense particles do not trigger observable V-to-T movement meet phonological requirements of the spell-out procedure (Zwart 2001). Although feature valuation via AGREE severely restricts the movement space for verbs, verb movement is not entirely dispensed with. Rather, verb fronting to a clause-internal MOOD projection is a prerequisite for subject and object raising for Case-theoretical purposes. The synchronization of verb fronting and subject raising is exemplified in (2), where both the subject nominal *the man* (*pə-rɔːme*) and the

verb stem *live* (*ḡ:nəḥ*) past the negation adverb *an* ‘not’. The clause-internal MOOD<sup>0</sup>-node is lexicalized by the future particle *na*, which has modal overtones.

- (2) *Verb movement and subject raising past negation* an (Matthew 4, 4)  
**nere** pə-rɔ:me na-ḡ:nəḥ an e-ojk mawaa=f.  
 PRET DEF.M.SG-man FUT-live.ABS not PREP-bread alone=POSS.3M.SG  
 ‘(It is written that) man would not live from bread alone.’

I argue that V-to-MOOD<sup>0</sup> movement sanctions subject raising *vis-à-vis* Chomsky’s (1995) ‘Minimal Link Condition’.

**4. THE SYNTAX OF TELICITY.** Verb movement also pulls the strings for direct object shift, although the relevant factor motivating object shift is the telic specification of the clause. In (3), both the verb *send* (*tənney*) and the direct object *his son* (*pe=f:ʃɛ:re*) move past the negation and since the subject *God* (*pə-nu:te*) has raised to the Spec position of MOODP, the verbal domain is voided of the verb and its nominal arguments.

- (3) *Argument voiding* (John 3, 17)  
**ənt-a** pə-nu:te gar tənney pe=f:ʃɛ:re an e-pə-kosmos (...)  
 REL-PERF DEF.M.SG-god PCL send.NOM DEF.M.SG-child not to-def.m.sg-world  
 ‘God has not sent his son to the world (...)’

Following Kratzer (2004), I derive the A-movement of the direct object from the [+telic] specification of an ASPECT head above the NEGP. In a sense, telicity is alike an EPP feature, which trigger direct object shift to the specifier position.

**5. CONCLUSION.** Coptic T/Aux-S-V-O order arises from the positive setting of an analytic macroparameter, whose corresponding abstract property in the syntax is a long-distance agreement relation between a left-periphery T(ense) node and defective verb stems. Since the finiteness feature is associated with the pre-subject tense particle, the verbal domain is eroded, forcing subject and direct object raising to the specifier positions of a designated MOOD and ASPECT projection, respectively. Thus, high analyticity involves a complex machinery of head and phrasal movement operations. The observable order TENSE > MOOD > ASPECT is in line with Cinque’s (1999) universal sequence of functional heads.

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# Circumstantial modality in Blackfoot

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In the Blackfoot Dictionary (Frantz and Russell 1989), the morpheme *ohkott* is translated as either ‘able to’ or ‘should’, but there is no analysis considering this morpheme as a modal. In this paper I argue that the morpheme *ohkott* is an existential circumstantial modal. I further show that *ohkott* does not convey the deontic obligation reading (‘should’) as Frantz and Russell’s translation suggests, but only the deontic possibility and ability readings. Under these readings *ohkott* behaves like an ordinary eventive verb in that it distinguishes between imperfective and perfective aspect, as shown in (1): (1a) contains the *a*- imperfective marker, and (1b) lacks it.

- (1) a. **aohkottsspiyi** (✓ability/✓permission/\*obligation)  
a-ohkott-ihpiyi  
IMP-**CIRC**-dance  
‘She is able to dance’  
‘She can dance’  
b. **ihkottsspiyi**  
ihkott-ihpiyi  
**CIRC.PFV**-dance  
‘He was able to dance’

The translation of (1a, 1b) into English as present vs. past correlates with the independently-known fact that verbs in the perfective in Blackfoot can only be interpreted as past tense (Reis Silva and Matthewson 2007). In the context of the ability modal, as well with many other eventive verbs beginning with *o*, the aspectual distinction is always morphologically signaled by a vowel change in initial position (*ohkott/ihkott*). This change is not observed with the obligation reading, which arises by combining the future modal *áak* plus the short form *ohk*, as illustrated in (2).

- (2) **áakohk**ihpiyi (\*ablity/\*permission/✓obligation)  
**yáak.ohk**-ihpiyi  
FUT.**CIRC**-dance  
‘She should dance’  
#‘She can dance’

My main goal in this paper is to provide an explanation for the pattern exemplified in (1) and (2). I propose that the so called ‘initial change’ (IC), a change in the vowel quality in word initial position (cf. Taylor 1969), affecting *ohkott* and not *áakohk* reflects the relative height of the modal with respect to aspect. When the modal is in the scope of aspect the IC is expected to happen. On the other hand, if the modal dominates aspect the analysis predicts that IC will not happen. This prediction is born out since unlike there is no *áakohk/áakihk* alternation. The proposed Blackfoot modal hierarchy is depicted in (3).

- (3) T > FUT > MOD<sub>ohk</sub> > ASP > MOD<sub>ohkott</sub>

Another piece of evidence for the hierarchy in (3) comes from the effect known as ‘actuality entailment’ (AE) (see Bhatt 1999, Hacquard 2006), that is, the fact that an ability assertion in the perfective aspect entails that an event of the relevant type took place in the actual world. The analysis proposed here is consistent with the cross-linguistic observation (cf. Cinque 1999) that deontic possibility modals do not occupy the same structural position as deontic necessity ones.

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## On Progressiveness in Persian

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In Persian, like many other languages the expression of aspect is intimately bound up with the expression of tense. This is why almost all traditional grammarians ignored this grammatical category. For example these scholars have enumerated several kinds of past tenses such as simple past, past progressive, past perfect, and present perfect (Shari, at 1989, Khanlari 1976). This paper is restricted to only one category of grammatical aspect in Persian i.e. progressiveness. It will be demonstrated that this aspectual notion is expressed in different ways including inflectional morpheme, auxiliary verb and lexical means. The first marker is the prefix *mi-*. Of course this morpheme is not specific to express progressiveness but it may express habituality, iterativity, and progressiveness as the following sentences show.

- (1) a. **habitual**      *Man har ruz dâneshgâh mi-raf-t-am*  
I every day university IMPER go-PAST-1SG  
'I went to the university every day'
- b. **progressive**      *Vaqtî to umadi man dars mi-xun-d-am*  
When you came I lesson IMPER- read- PAST-1SG  
'When you came I was studying'
- c. **Iterative**      *sad bâr mi-g-am*  
hundred times IMPER- say-1SG  
'I say one hundred times'

Some linguists ignored the different aspectual meanings of this prefix and regarded it as the exclusive marker of progressiveness (Rahimian 2007). One source of controversy is the polysemic nature of the prefix *mi-* expressing divers aspects. As Vahidian and Emrani (2000:44) have noted, this imperfective marker in Modern Persian no longer expresses progressive aspect in the present tense. As (1b) indicates this prefix may express progressiveness only in the past tense.

Another way to express progressiveness is the use of the verb *dâstan* (to have) that is used with the main verb as an auxiliary or helping verb in both present and past tenses.

- 2) *dâr-am ye nâme be dust -am mi -nevis-am.*  
have-1SG. one letter-ACC to friend-my IMPER -write-1SG

'I am writing a letter to my friend.'

- 3) *dâšt-am ye nâme be dust -am mi -nevešt-am.*  
had-1SG. one letter-ACC to friend-my IMPER -write-PAST-1SG  
'I was writing a letter to my friend.'

As(2) and (3) show the structure of these tenses is V1 NP V2. Both V1 and V2 take the subject agreement and they share a single object. Taleghani(2006) says that these structures look like a bi-clausal construction but neither a complementizer nor a conjunction separates the two verbs, and the construction refers to a single conceptual event. Therefore, they behave like a Serial Verb Construction.

Besides, Persian has some lexicalized means expressing the functional equivalents of those kinds of aspects that are not marked morphosyntactically. One way to express the progressive aspect is the expression *dar hâl-e* or *mašqul-e* ‘in the process of’. These expressions serve as the head of an EZAFE construction followed by the infinitive form of the verb as their dependents. It should be noted that *mašqul* is usually used with an animate subject. This can be illustrated by the following examples:

- (4) a. *Ali dar hâl-e raftan ast.*  
           Ali in process-EZ go-INF be-3SG  
           ‘Ali is leaving.’  
       b. *mâ mašqul-e xordan hast-im.*  
           We in process-EZ eat-INF be-1PL  
           ‘We are eating.’

In sum, this paper shows that progressiveness is different from imperfectivity including habituality and iterativity. Also, it demonstrates that the notion of progressiveness is expressed by different forms. Indeed, both grammaticalized and lexicalized means are used to express this notion in Persian. However, it should be noted that not all Persian verbs have a progressive aspect. For example states and achievements are two main exceptions in this regard.

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## Events and Action Modality within Swedish Agentive Nominal Compounds

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### Abstract

This study addresses the semantics of agentive compounds, and concentrates on nominal compounds with N and V constituents. In Swedish, there are, at least, three such types:

- [N [V *are*]<sub>N</sub>]<sub>N</sub> (*fanbärare* ‘flag bearer’)
- [N [V *a*]<sub>N</sub>]<sub>N</sub> (*gräshoppa* ‘grasshopper’)
- [N [V]<sub>N</sub>]<sub>N</sub> (*biltvätt* ‘car wash’)

They give rise to polysemy and sense shifting within the agentive domain, since they do not only denote humans, but all sorts of animate entities, e.g. animals, plants and insects, as well as artifacts, e.g. instruments and impersonal agents. In addition, they sometimes refer to events and places, and can, very occasionally, involve a causative reading. The data comes from different sources, such as research literature, Internet and dictionaries. Our analysis will be supported by representative examples.

The morphological approach is lexeme-based, and adheres to Construction Morphology, being elaborated by Booij (2009). Compounds are morphological constructs, which cannot be syntactically generated (cf. Corbin 1992, Fradin 2009). Given that none of the three Swedish compound types, NV-*are*, NV-*a*, and NV, have syntactic structure, they satisfy this condition. As to NV-*are* and NV-*a* compounds, also called synthetic, their V lexeme, the stem, combines with a suffix. By this, they are formed by the process of “conflation”, involving both compounding and derivation (cf. Booij 2009).

The objective is to examine the event expressed within these compounds. The semantic roles of the N and of the compounds are crucial for the semantics readings underlying the compounds. Our analysis will also make use of the two semantic macro-roles, Actor and Patient (cf. Van Valin 2002). The semantics of the V are further explored as to the four classes of *Aktionsart* (cf. Vendler 1957), and as to unaccusativity and inergativity (cf. Burzio 1986, Perlmutter 1988). Yet, in order to further specify the semantic presentation of agentive compounds, the lexicalization of action modality is an important component.

Rappaport Hovav and Levin (1992) divide *-er* nominals into event and non-event, a distinction similar to stage-level vs. individual-level nominals (cf. Carlson 1977, Pustejovsky 1995). Inheritance of argument structure correlates with the event interpretation, whereas instruments and occupations, which do not presuppose the existence of an event, typically are non-events (cf. also Josefsson 2005). On this view, compounds, for which the syntactic implications are not relevant, should be non-event. However, Busa (1996) claims that all agentive nominals can be characterized in terms of events. She distinguishes first between changeable property for stage-level nominals and persistent property for individual-level nominals, which involve state predicates. In the Generative Lexicon framework, these properties are lexically encoded as agentive and telic roles of the event. Nevertheless, the stative predicates of individual-level nominals can be additionally divided, as to agentive role, into Ability or Habitual modality. Jackendoff (2009:119-120) lists five major action modalities, i.e. variant interpretations under which a nominal can be understood:

- Habitual activity
- Ability
- Current (specific activity on a specific occasion, thus stage-level)
- Occupation
- Proper function



The choice of action modality is thus not only a matter of pragmatics, but can be part of the lexical meaning. The Proper function modality concerns essentially objects, and can be further divided into (i) artifacts (e.g. *can opener*); (ii) parts of artifacts (e.g. *back* of a chair) or of organisms (e.g. *leaves* of a plant); (iii) objects destined to become something (e.g. *seed* > plant). Jackendoff (2009) notes the importance of exploring the full range of action modalities, and this will be one aim of our study.

Our study shows, *inter alia*, that the compounds tolerate unaccusative and inergative readings of the event expressed therein. The four *Aktionsarten* are also accepted. Furthermore, the Actor ( $\lambda x.V'e \bullet x \bullet y \wedge N' \bullet y$ ) and the Instrument ( $\lambda z.(V'e \bullet x \bullet y \bullet (\text{with}' \bullet z) \wedge N' \bullet y)$ ) patterns, in which N is a Patient, are the most productive for all three compound types. The N within the compounds can also correspond to e.g. Goal, Place, Time and Instrument. The compounds do not behave equally in their lexicalization of action modality. This could be a case of blocking, explaining the high productivity of the NV-*are* compounds.

Table 1. Lexicalization of action modality among three Swedish agentive compounds

|                | Occupation                        | Habitual                             | Ability                               | Current                               | Proper funct.                        |
|----------------|-----------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| NV- <i>are</i> | <i>bussförare</i><br>'bus driver' | <i>nagelbitare</i><br>'nailbiter'    | <i>fiolspelare</i><br>'violin player' | <i>snöskottare</i><br>'snowshovel-er' | <i>skruvdragare</i><br>'screwdriver' |
| NV- <i>a</i>   | ?                                 | <i>gatslinka</i><br>'streetslink-er' | <i>fågelskrämma</i><br>'scarecrow'    | <i>barhoppa</i><br>'barjump-er'       | <i>klädnyppa</i><br>'clothespin'     |
| NV             | <i>livvakt</i><br>'bodyguard'     | ?                                    | ?                                     | <i>barnvakt</i><br>'babysitter'       | <i>brödrost</i><br>'toaster'         |

To sum up, this study speaks in favor of the idea that agentive compounds express an event, which can be specified as to action modality. We hope that our results might apply universally to agentive compounds containing a V and an N. Moreover, the study hopes to shed some light on the semantic representation of such compounds in the lexicon.

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## Change-of-stage vs. change-of-individual: the Nyamal usitative

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Nyamal (a language spoken in the north west of Australia) possesses three past tenses, which have been labeled ‘usitative’, ‘past’ and ‘continuative past’ by Dench (ms). Each has two forms (expressed by a suffix on the verb) depending on their conjugation class. Verbs in Nyamal are categorized into two classes with an almost perfect correlation with transitivity, which is unusual for languages in the area. The L-class thus contains transitive verbs, while the  $\emptyset$ -class has intransitives, namely states and activities. We will here focus on the usitative (-*yamu* in the  $\emptyset$  conjugation class, -*l(k)amu* in the L conjugation class). This tense has three basic uses:

- (i) past habits/practices that are no longer followed, cf. (1):
  - (1) Yamu -rna ngaja pirrapirra-karni  
goUSIT-1sg 1sgNOM pearlshell-ALL  
I used to go for pearlshell.
  - (ii) ‘existential hapaxes’ (in the sense of Onfray 1989), i.e. turning points in an individual’s life, radically its *nature*; such readings typically occur with a limited range of event descriptions, such as events described by *marry*, *leave* (a job, a social/geographical environment...), *die*..., cf. (2)-(5):
    - (2) Then he malkarri -ngarri-yamu now  
pass.away-INCH-USIT  
And then he passed away.
    - (3) Pirirri-ngarri-yamu-ngka pala-ngka?  
man-INCH-USIT-2sg that-LOC  
You came to be a man there?
    - (4) Kati-yamu nganya warilangu-karni  
take-USIT 1sgACC Warralong-ALL  
I was taken to Warralong Station.
  - (iii) Life-period (‘individual-level period’): bounded period at the end of which the subject of the predication changes (end of one’s childhood/education period..)
    - (5) Parrirti-ngarri-yamu-rna yari-ngka  
grown.up-INCH-USIT-1sg Yari-LOC  
I grew up at Yari Station.

The analysis we intend to propose here is based on an extension of Carlson’s (1977) classic treatment of kind reference vs. individual(-level) reference vs. stage(-level) reference: we propose to distinguish between *k*-individuals (or *k*-ind) and individuals, where *k*-ind refers to our ability to consider an individual from a completely global, and almost eternal point of view. In contrast, we will argue that *individuals* actually refer to different ‘periods’ (and natures/essences) for a given *k*-individual (one can almost think of them in terms of ‘sub-lives’ –hence our use of the concept of *k*-ind to abstract over the totality of these life periods/essentially distinct entities, although they remain united in a sense: cf. Rimbaud’s famous formula “*I is an other*”). The important implication of this ontological move is that it is possible to conceive, for a given *k*-individual, transitions from individual to individual (that is: changes of individual) on a par with the usual notion of transition from state to state (that is: stage-level changes-of-state).

The obvious empirical difficulty with the Nyamal usitative lies in the apparent paradox of its imperfective-like, habitual/generic readings (i), vs. perfective like, ‘life-change’ uses (ii)-(iii). We

will account for this by positing that the usitative requires the verbal predicate it applies to be individual-level (or at least to entail some individual-level predicate, cf. Kratzer 1995); whether this predicate involves a 'stable' individual or a change-of-individual remains underspecified. We will indeed claim that the usitative is underspecified to the extent that it can either receive a 'bona fide' generic reading (corresponding to the well documented generic uses of imperfective viewpoint tenses, such as the French *imparfait*) or a 'change-of-individual' reading (associated with a perfective interpretation). This (partial) semantic underspecification will be here modelled using a discontinuous DRT-style underspecified semantics, as in e.g. Reyle et al. (2008).

We will assume an algebra endowed with a 'transition' relation  $\preceq$  defined on the set of individuals  $\mathcal{A}$  and the set of events (stages)  $\mathcal{E}$ , such that if  $x$  and  $y \in \mathcal{A}$ , then  $x \preceq y$  means that  $x$  becomes/'carries on' with  $y$ , and if  $e$  and  $e' \in \mathcal{E}$  then  $e \preceq e'$  means that  $e$  brings about or results in  $e'$ . 'Change-of-individuals' will be modelled using  $\preceq$ ; they will be tied to temporal structure *via* specific postulates connecting individual-level predicates (such as those required by the usitative) with stage-level predicates, so that changes-of-individuals will be somehow ontologically connected with changes-of-state. We will also assume Carlson et al's (1995) event-summarizing operator  $\sigma$  to model event pluralities (which we take to correspond to stages, which makes up the 'extension' or habits seen as generic/intensional expressions), as well as a theory of habituality akin to Doron & Boneh (2008). Furthermore, we will assume that the aspectual contribution of a fully disambiguated verb consists in a complex structure, comprising several sub-event (or stage) descriptors – in particular *inner stages* (which correspond to the core part of an event) vs. *result stages* (which correspond to its result state/event).

Contextual factors will play a determining role in lifting the semantic underspecification of the usitative: within a non-change-of-state/change-of-individual context, the usitative will be interpreted very much like Doneh & Boron's (2008)  $HAB_{MOD}$  function, i.e. as contributing an (imperfective) modalized habituality operator, taking the 'inner stage' event description as its argument, and construing from it an individual-level property. *Vice versa*, when we are dealing with 'life-change' examples such as (2)-(4) (generally inferred from both linguistic/lexical semantic and contextual/world-knowledge information), we will derive the appropriate interpretation from the fact that what matters is that the result stage associated with the relevant predicates expresses a change-of-individual. Indeed, given a certain transition  $x \preceq y$  from two individuals (i.e. life-episodes)  $x$  and  $y$ , then the 'last' stage pertaining to the sum of stages related to  $x$  *via* a certain realization relation  $R$  (in the sense of Carlson 1977) can be identified with the event (stage) described by the 'life-changing event' predicate (i.e. *be\_taken\_to Warralong\_station* in (4)); and  $y$  will be assigned an individual-level property inferred from the result stage of the same 'life-changing' predicate (i.e. *be\_taken\_to-Warralong*  $\rightarrow$  *live\_in\_Warralong*) – crucially a property which  $x$  does not possess (and which substantiates the aforementioned change-of-individual). It follows from this (and the connection between individual-level changes and stage-level changes) that such readings will be perfective: a change-of-state(/stage) takes place in parallel with a change-of-individual.

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## Decoupling tense and aspect in Chinese

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Mandarin Chinese is a language that does not have overt morphological marking of tense. There has been debate in the literature about whether or not this implies that the language also lacks a tense projection in the syntax, a debate which has raised important questions regarding the realization of semantic tense and aspect cross-linguistically. In this paper, we present new evidence of ‘sequence of tense’ interpretations in Chinese that motivates separating tense semantics from aspect semantics in the language. Our analysis reconciles the observation that overt markers of perfective aspect are inherently linked to past tense in Chinese (Lin 2005) with a licensing account of past tense features as suggested for English (Ogihara 1989, Stowell 1993, Kusumoto 2005, a.o.).

**Perfective aspect and past tense.** A close connection between tense and aspect has been proposed for Chinese based on the observation that perfective aspect markers (*guo*, verbal *le*) contribute a meaning of anteriority to a sentence, even when no temporal adverbial explicitly shifts the reference time of the event described (1). In the absence of overt aspect marking, a default specification of viewpoint aspect seems to be determined by the inner aspect of the verb phrase (Bohnenmeyer & Swift 2001), and specifically, perfective aspect is the default for telic VPs (2). Lin (2005) gives *guo* and *le* a hybrid semantics in order to account for these facts: a combination of perfective aspect and past tense bundled in one aspect morpheme.

- |   |  |
|---|--|
| (1)    Lisi diē-duàn-le      zuǒ tuǐ<br>Lisi fall-break-ASP left leg<br>‘Lisi has broken his left leg’<br>(Lin 2005, example (16d)) | (2)    Yuēhàn shuō Mǎlì dǎpuò(-guo) huāpíng<br>John    say    Mary break(-ASP) vase<br>‘John said that Mary had broken a vase’<br>(Lin 2005, example (46)) |
|---|--|

A bundling account of perfective aspect with past tense predicts that embedded perfective VPs in Chinese give rise only to back-shifted readings (as suggested by the gloss in (2)). Simultaneous readings of ‘Perfective under Perfective’ sentences should not be possible if this is the case.

**Simultaneous readings.** Our findings, based on the judgments of 20 native speakers (collected through an online questionnaire), show that simultaneous readings are available for embedded clauses with *le* and default perfective aspect in Chinese. This reading is found in examples with one as well as two levels of embedding ((3) and (4) respectively). The latter in particular call for an analysis which allows an embedded past tense to go uninterpreted in the semantics (Abusch 1997).

(3) Context: Mary always enters John's glass shop with a big backpack on her back. Last month she broke a vase this way and she just entered the shop again now. Oh no, ...:

Yuēhàn shuō Mǎlì dǎpuò-le      huāpíng  
John    say    Mary break-ASP vase  
‘John may be talking about the first vase’: 75% (15/20 respondents)  
‘John may be talking about the second vase’: 75% (15/20 respondents)

(4) Context: In one city, the mayor and the city council are not on good terms. The mayor recently offered a big contract to a certain company, without securing the consent of the council.

Having found that out, the council summoned the company's CEO to their next assembly. Unbeknown to him, during that meeting he will be required to either reject the mayor's offer or accept it.

Jīntiān yī gè shì yì yuán cāicè xià cì shì yìhuì shàng  
Today one CL city council man guess next time city council during

gōngsī zǒngcái huì xuānbù tā jùjué shìzhǎng de tián  
company president will announce he refuse mayor DE proposal

‘One councilman guessed today that during the next city council meeting the CEO would announce that he rejected the mayor's proposal’

‘The CEO's rejection may be given during the meeting’: 94.7% (18/19 respondents)

‘The CEO's rejection may be given before the meeting’: 21.1% (4/19 respondents)

We obtained simultaneous readings for an embedded *le*/telic VP in contexts that supported them: an announcement that is itself a speech act of rejection (as in (4)), or a live broadcast of a telic event (‘breaking a cup’ in the Chinese version of *Bill decided a week ago that in the broadcast next month he would show his mother that he broke the cup*). Chinese behaves like English with respect to ‘sequence of tense’, and unlike languages like Hebrew and Japanese (Sharvit 2003), in which an embedded past tense causes backward-shifting in examples like (4).

**Proposal.** Based on the availability of simultaneous reading of ‘Perfective under Perfective’, we propose that perfective aspect markers in Chinese do not themselves shift times of evaluation, contra Lin (2005), but rather introduce a feature ([+past]) that needs to be licensed by a c-commanding past tense operator (see e.g. Kusumoto 2005 for English). Different aspect markers come with different licensing conditions: *guo* needs to be immediately embedded under past tense, while *le* (and default perfective aspect) tolerates licensing from a distance. In matrix contexts, this creates the illusion that aspect is bundled with tense (1'). Otherwise, an embedded *le*-marked phrase may receive a simultaneous reading if it is not clausemate with its past tense licenser (3'). Although *guo* seems to be always bundled with past tense, we maintain a single semantic type for aspect markers by separating aspect and tense in its denotation too.

(1') Lisi [**PAST** [fall-break-LE[+**past**] left leg]]

(3') Simultaneous reading: John [**PAST** [say[+**past**] [Mary break-ASP[+**past**] vase]]]

Backshifted reading: John [**PAST** [say[+**past**] [Mary [**PAST** break-ASP[+**past**] vase]]]]

Chinese is a tenseless language under our proposal because its tense operators are never pronounced, not because it lacks tense projections.

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## The meaning of numerical additive particles: the case of Japanese *moo* and *ato*

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**Introduction:** In Japanese the numerical additive meaning is expressed by the particle *ato* or *moo* plus a numeral classifier/measure phrase:

- (1) (Watashi-wa) beeru-o {moo/ato} 1-pai nomi-masu.  
I-TOP beer-ACC more.add 1-cup drink-performative.honorifics  
'I will drink one more glass of beer.'  
At issue: I will drink one glass of beer.  
Presupposition: I drank at least one glass of beer before the time of utterance.

In (1) there is a 'prior time' presupposition (Greenberg 2009) that the event of drinking beer occurred prior to the time of utterance. However, *moo* and *ato* are different in terms of scale structure. While sentence (1) with *ato* implies that 'the next glass will be the final glass,' the one with *moo* does not have such an implication of 'finality.'

Note that *ato*, but not *moo*, cannot appear if the sentence predicate is adjectival:

- (2) Kono sao-wa {moo/\*ato} 5-do magat-teiru.  
This rod-TOP more 5-degree bend-PERFECTIVE  
'This rod is 5 degrees more bent.'

Sentence (2) with *moo* states that the rod is 5 degrees more bent than a contextually determined object. It is crucial to note that *moo* does not trigger a prior time presupposition in (2).

The purpose of this paper is to investigate the scalar properties of *ato* and *moo* and explain the asymmetries in (1) and (2) in a unified way. I claim that there are two modes of additivity: (future) **endpoint** additivity and **non-endpoint** additivity. *Ato* is an endpoint-oriented additive particle because it denotes that the result of adding an asserted degree to an existing degree will reach an 'unrealized' endpoint. *Moo* is a non-endpoint-oriented additive particle in the sense that it only adds to an existing degree.

It will be shown that the distributional difference between *ato* and *moo* and the presence/absence of presupposition in sentences (1) and (2) can naturally be explained by the interaction between the scalar properties of the additive particles and the denotations of the predicates; Verb vs. Adjective. The theoretical implications are that an additive meaning can be expressed both in the domain of presupposition and in the domain of assertion using the same degree morpheme, *moo*, and that the two domains are semantically parallel in terms of scalarity.

**The meaning of event-based additivity:** Let us first consider the meaning of (1), which we can analyze using Davidsonian event-based semantics (Greenberg 2009). (3) shows the assertion and presupposition of (1) with *moo* (here I omit the meaning of politeness for the sake of brevity):

- (3) Meaning of sentence (1) with *moo*

- a. Assertion:  $\exists e_1 \exists t_1 [t_1 > \text{now}, \text{drink}(e_1), \text{Ag}(e_1) = I, \text{Th}(e_1) = \text{beer}, \# \text{glass of beer} = 1, \tau(e_1) \subset t_1]$   
b. Presupposition:  $\exists e_2 \exists t_2 [t_2 < \text{now}, \text{drink}(e_2), \text{Ag}(e_2) = I, \text{Th}(e_2) = \text{beer}, \# \text{glass of beer} \geq 1, \tau(e_2) \subset t_2, (e_2 + e_1) = e_3]$

The presupposition states roughly that there was an drinking eventuality whose agents is I and whose theme is beer and the cardinality of a glass of beer is at least one and adding the asserted

eventuality ( $e_1$ ) to the presupposed eventuality ( $e_2$ ) results in a ‘larger’ eventuality ( $e_3$ ) (Greenberg 2009). Note that the meaning of (1) with *ato* is different from the same sentence with *moo*, in that it has an endpoint oriented additive meaning:

(4) Meaning of sentence (1) with *ato*

- a. Assertion:  $\exists e_1 \exists t_1 [t_1 > \text{now}, \text{drink}(e_1), \text{Ag}(e_1) = I, \text{Th}(e_1) = \text{beer}, \#(\text{beer}) = 1, \tau(e_1) \subset t_1]$
- b. Presupposition:  $\exists e_2 \exists t_2 [t_2 < \text{now}, \text{drink}(e_2), \text{Ag}(e_2) = I, \text{Th}(e_2) = \text{beer}, \#(\text{beer}) \geq 1, \tau(e_2) \subset t_2, (e_2 + e_1) = \text{future endpoint}]$

In (4b) there is an endpoint oriented presupposition: that adding the asserted eventuality ( $e_1$ ) to the presupposed eventuality ( $e_2$ ) makes eventuality reach an unrealized endpoint. (This claim is supported by the fact that it is odd for the speaker to drink another glass of beer if he/she has already uttered (1) with *ato*.)

**The meaning of additive comparison:** Now let us consider the environment where a gradable predicate is used:

- (5) Kono    sao-wa    [{*moo*/\**ato*}    5-do]    magat-teiru.  
       This    rod-TOP    more            5-degree bend-PERFECTIVE  
       ‘This rod is 5 degrees more bent.’

The meaning of *moo* in (5) contributes to the domain of ‘at issue’ semantics rather than to the domain of presupposition. This is corroborated by the fact that unlike in (1), the meaning of sentence (5) changes if we delete *moo*:

- (6) Kono    sao-wa    5-do    magat-teiru.  
       This    rod-TOP    5-degree bend-PERFECTIVE  
       ‘This rod is 5 degrees bent.’

(5) is interpreted as a differential measurement, but (6) is interpreted as a direct measurement. I argue that when *moo* is used with an adjectival predicate, it selects a contextually determined standard (entity) in the domain of ‘at issue’ semantics and adds a degree to the standard. The truth condition of (5) with *moo* can be represented as follows:

- (7)  $\exists d_1 [\text{bentness}(\text{this rod}) = d_1 \wedge \exists d_2 [\text{bentness}(\text{context.entity}) = d_2] \wedge d_2 + 5\text{degrees} = d_1]$

Then why can’t *moo* in (5) trigger a prior time presupposition? Also, why is (5) with *ato* odd? I argue that these facts are due to the denotations of the predicate. As Rothstein (1999) argues, although verbs denote eventualities, which are count entities, adjectives denote mass entities, which are states. *Moo* in (5) cannot trigger a prior time presupposition because the adjective is stative. Thus, the only way to express additivity in the adjectival domain is to posit a contextually determined standard to which degrees are added. Likewise, *ato* in (5) cannot be used in the adjectival domain because the result of adding 5 degrees to a contextually determined standard corresponds to the current degree of bentness of ‘this rod’, not an unrealized endpoint.

**Conclusion:** This paper argues that whether the meaning of an additive degree morpheme belongs to the domain of presupposition or the domain of ‘at issue’ semantics depends on the predicate the additive particle combines with. The theoretical implications are that the concept of scalar additivity is pervasive in natural language, and that there is some parallelism between the domain of ‘at issue’ semantics and the domain of presupposition in terms of scalar additivity.

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## Contre le temps d'assertion

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**But du papier** Nous allons montrer qu'une analyse de l'aspect à l'aide d'un temps d'assertion/temps topique (cf. Klein, 1994) ou d'un intervalle de focalisation (cf. Smith, 1991) n'est pas empiriquement supérieur à une analyse qui élimine un tel intervalle et renonce à l'hypothèse de l'aspect à deux composantes — au moins pour les raisons invoquées par ces auteurs. Ainsi, pour des raisons méthodologiques, un système plus simple devrait être préféré.

**De la (non-)nécessité d'un temps d'assertion** L'introduction d'un tel intervalle a été justifiée essentiellement de deux façons: premièrement, pour restreindre la visibilité de parties d'une situation — dans le cadre d'une métaphore optique (i.e., la comparaison avec une lentille) chez Smith (1991), et deuxièmement, dans le cadre d'une séparation entre contenu asserté vs. contenu implicite chez Klein (1994). Dans la façon selon laquelle ces arguments ont été présentés, les deux points de vue sur l'aspect ont contribué à faire de l'aspect une catégorie universelle et obligatoire, présente dans chaque phrase. Dans la théorie de Smith, sans aspect (donc sans lentille), la situation sous-jacente serait tout bonnement invisible. D'après l'hypothèse de Klein, sans aspect dans une phrase assertive, on n'aurait pas d'intervalle pour laquelle s'engage le locuteur, et donc pas d'assertion.

En ce qui concerne Smith (1991), nous nous bornerons à remarquer que le choix de sa métaphore est peut-être éclairante, mais tout sauf innocent. Une métaphore tout aussi appropriée produit des jugements radicalement opposés: supposons que l'aspect ne serait pas la lentille d'une caméra, mais son obturateur, qui cache sélectivement des parties de la situation. L'absence d'obturateur aurait comme effet la vision globale de la situation (et donc l'équivalent d'un aspect perfectif).

Pour la théorie de Klein, l'introduction d'un temps d'assertion trouve sa justification essentielle dans l'analyse d'exemples comme les suivants:

- (1) a. Ivan rabotal<sub>imp</sub> v Moskve.  
Ivan travaillait à Moscou.
- b. Ivan rabotal<sub>imp</sub>, rabotaet<sub>imp</sub> i budet rabotat'<sub>imp</sub> v Moskve.  
Ivan travaillait, travaille et travaillera à Moscou.

Klein raisonne comme suit: si le temps grammatical localisait directement la situation en (1a) avant le moment de l'énonciation, on devrait avoir une assertion concernant la terminaison de l'éventualité. Or, une telle assertion n'existe pas, comme le montre l'acceptabilité de (1b). Donc, on ne peut pas avoir de localisation directe de la situation, et on doit restreindre l'assertion du locuteur à un intervalle situé dans le passé.

Or, cette conclusion de Klein n'est pas nécessaire. Elle dépend essentiellement de l'hypothèse auxiliaire que la situation doit être située dans sa globalité. Si on n'admet pas cette hypothèse, la nécessité de l'intervalle d'assertion ne suit plus. Or, dans le cadre d'une ontologie (néo-)Davidsonienne, il n'y a pas de raison pour accepter cette hypothèse. Klein argumente notamment contre une représentation du temps comme illustrée en (2a), ce qui mènerait à la représentation (simplifiée) (2b) pour (1a).

- (2) a.  $\llbracket \text{passé} \rrbracket = \lambda P \exists e [\tau(e) \prec n \wedge P(e)]$   
 $\llbracket \text{présent} \rrbracket = \lambda P \exists e [n \subseteq \tau(e) \wedge P(e)]$   
 $\llbracket \text{futur} \rrbracket = \lambda P \exists e [n \prec \tau(e) \wedge P(e)]$
- b.  $\exists e [\tau(e) \prec n \wedge \text{travailler}(e) \dots]$



*Travailler à Moscou* est à classer en (1) comme un état générique. Il ne fait donc pas de doute qu'il s'agisse d'une situation parfaitement homogène. Et c'est tout ce dont nous avons besoin pour expliquer l'acceptabilité de (1b).

Supposons qu'il existe une situation de type *Ivan travailler à Moscou* qui dure depuis 1980 et qui se prolongera probablement encore quelque temps dans le futur. Rien dans un tel contexte n'empêche l'énonciation véridique d'une phrase dont la dénotation serait (2b), puisque la situation sous considération est divisive (cf. Kiparsky, 1998). Il se pourrait que dans certains contextes, (2b) ne soit pas suffisamment informative; elle reste cependant vraie.

On peut également dériver les bonnes conditions de vérité pour (1b), sans s'encombrer d'un temps d'assertion. L'analyse de cette phrase ne peut donner lieu à une contradiction que si un seul quantifieur existentiel lie les trois éventualités à la fois, comme en (3):

$$(3) \quad \exists e[\tau(e) \prec n \wedge n \subseteq \tau(e) \wedge n \prec \tau(e) \wedge \text{travailler}(e) \wedge \text{Agent}(\text{Ivan}, e)]$$

Une éventualité ne peut pas être à la fois strictement antérieur et strictement postérieur au moment de l'énonciation, tout en chevauchant le moment de l'énonciation, comme le requiert la formule (3). Or, avec l'hypothèse très conservative d'une coordination au niveau de la projection du temps, sans avoir recours à une ellipse phrastique, mais avec une sémantique standard pour la conjonction généralisée (cf. (4), d'après Jacobson, 1996, p. 93), on obtient une formule qui est parfaitement adéquate pour représenter les conditions de vérité de (1b), à savoir (4c).

$$(4) \quad \begin{array}{ll} \text{a.} & \lambda P \exists e[\tau(e) \prec n \wedge P(e)] \sqcap \lambda P \exists e[n \subseteq \tau(e) \wedge P(e)] \sqcap \lambda P \exists e[n \prec \tau(e) \wedge P(e)] \Rightarrow \\ \text{b.} & \lambda P [\exists e[\tau(e) \prec n \wedge P(e)] \wedge \exists e[n \subseteq \tau(e) \wedge P(e)] \wedge \exists e[n \prec \tau(e) \wedge P(e)]] \\ \text{c.} & \exists e[\tau(e) \prec n \wedge \text{travailler}(e)] \wedge \exists e[n \subseteq \tau(e) \wedge \text{travailler}(e)] \wedge \exists e[n \prec \tau(e) \wedge \text{travailler}(e)] \end{array}$$

(4c) n'est pas incompatible avec l'existence d'une seule situation qui n'a jamais cessé. *Travailler à Moscou*, puisque c'est homogène, est également cumulatif, ce qui revient à dire que les trois situations du même type en (4c) peuvent être additionnées sous certaines circonstances pour former une seule super-situation, qui peut être décrite comme *travailler à Moscou*.

Ainsi, pour l'analyse de phrases comme (1b), il n'est pas nécessaire d'introduire un intervalle additionnel dont la seule fonction serait de limiter l'assertion à une période donnée.

**Conclusion** Nous montrons qu'un système sans temps topique peut rendre compte de cas qui ont été présentés comme nécessitant forcément l'ajout d'un tel intervalle, et que l'intuition centrale de Klein sur la fonction de l'aspect, à savoir le fait d'asserter quelque chose par rapport à une situation, peut être maintenue sans l'ajout d'un élément spécifique.

Une telle conclusion a la conséquence importante de battre en brèche l'hypothèse de l'universalité d'une catégorie fonctionnelle 'aspect' dans les langues naturelles. S'il n'existe pas de catégorie nécessaire à la visualisation d'une situation (ou à son assertabilité), il n'y a pas de raison de croire que les langues ne devraient pas utiliser des procédés fort différentes pour traiter de questions d'ordre aspectuel (ou de l'*Aktionsart*).

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## ***After and before-clauses in European Portuguese: temporal and aspectual properties***

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The main goal of this paper will be to discuss the temporal and aspectual features of sentences with clauses introduced by the connectors *antes de* + Infinitive ('before' + Infinitive) and *depois de* + Infinitive ('after' + Infinitive) in European Portuguese. Our discussion is predicated on the widespread view that these clauses are locating adverbials (cf. Kamp and Reyle (1993)) with temporal information of anteriority, in the case of *antes de* (see (1)), and posteriority, in the case of *depois de* (see (2)) (cf. García Fernandez (1999) and Lopes Morais (1999)).

- (1) Antes de ir ao cinema, o João jantou. ( $e_2 < e_1$ )

Before going to the cinema, João dined.

- (2) Depois de ir ao cinema, o João jantou. ( $e_1 < e_2$ )

After going to the cinema, João dined.

However, this analysis is not as straightforward as one would expect, because, while the *before*-clauses consistently render the same temporal relation (of anteriority), the *after*-clauses may convey another temporal relation (of inclusion (cf. (3))) in addition to the standard posteriority relation.

- (3) Depois de estar em Paris, a Maria aprendeu Francês.

After being in Paris, Maria learnt French.

This sentence is ambiguous between two readings: in one of them, Maria learns French after she was in Paris (posteriority) and, in another one, Maria learns French while she was in Paris (inclusion). How can we account for these two interpretations? We will put forward the hypothesis that aspectual characteristics will play an important role insofar as allowing a temporal reading that at first sight is not predicted by the semantic nature of the connector. In fact, the presence of a state or an event in the locating clause may influence the possibility of obtaining or not that temporal reading of inclusion (compare (3) with (4)).

- (4) Depois de casar com o Pierre, a Maria aprendeu Francês. ( $e_1 < e_2$ )

After marrying Pierre, Maria learnt French.

The observation of these data poses the question whether a uniform treatment of the *before* and *after*-clauses with respect to their temporal features is feasible. We will argue that such an analysis is indeed possible.

We claim that the locating time interval provided by both *before* and *after*-clauses is bounded to the left, but not to the right, that is, what is focused is the initial frontier of the time interval, leaving the final one undetermined. In these types of clauses, the initial frontier coincides with a salient phase of the situation that by default is the initial one. Such an analysis allows us to describe the asymmetries observed in *before* and *after*-clauses.

(5) Antes de estar em Paris, a Maria aprendeu Francês.

Before being in Paris, Maria learnt French.

(6) Depois de estar em Paris, a Maria aprendeu Francês.

After being in Paris, Maria learnt French.

In the case of *before*-clauses, like (5), (i) the connector locates the whole main situation before the interval represented by the *before*-clause; (ii) the beginning of the eventuality of the subordinate clause coincides temporally with the initial frontier of that interval; (iii) the right boundary of the time interval of the *before*-clauses is not relevant because the main situation is located prior to the beginning of the whole interval represented by the subordinate clause. Taking these premises into account, only a relation of anteriority is allowed.

In the case of *after*-clauses, like (6), (i) the connector locates the whole main situation after the interval represented by the *after*-clause; (ii) the beginning of the eventuality of the subordinate clause coincides temporally with the initial frontier of that interval; (iii) the right boundary of the time interval of the *after*-clauses is undetermined, but it is relevant because the main situation is located after the beginning of the whole interval represented by the subordinate clause. These features create the necessary conditions for the interference of aspectual properties in the final interpretation of the sentence: the events are included in their reference times and, thus, impose a successivity reading whereas the states overlap their reference times, holding sometimes after that interval, which explains both temporal relations (of posteriority and inclusion).

Overall, although the temporal mechanisms are parallel, the interference of aspectual properties leads to interesting differences in the final interpretation of *before* and *after* sentences.

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## Does Aspect Solve the Ambiguity of the Modal? A Case Study of Russian Modal Verbs

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One can distinguish different kinds of modal meaning, among which deontic, epistemic, and alerthic are of primary importance in the study of natural language (Kai von Fintel 2006). Modals referring to the present and the past are often ambiguous in this respect, as it was shown in the multiple research on the temporal interpretation of modals (Condoravdi 2002; Demirdache&Uribe-Etxebarria 2008). Slavic languages seem to offer an additional tool for the disambiguation of modals, i.e. the grammatical category of aspect, confronting researches with a question how perfective and imperfective verbs are interpreted in modal structures. Šmelev&Zaliznjak (2006) claim that the standard modal interpretation for a perfective verb is alethic while imperfective verbs tend to be interpreted as deontic. Choi (1999: 61-62) concludes that the perfective infinitive tends to encode the meaning of epistemic possibility. So, what affect does Slavic aspect have on the modal meaning and what determines the different conclusions on the standard modal interpretation of aspect?

In this work we propose a case study of the verbs *moč'* and *smoč'* 'may, can', which, basically, are the only modal verbs in Russian (most Russian modals are impersonal predicative adverbs or adjectives). Being part of the Russian verbal system, the two modal verbs are marked by the grammatical category of aspect: *moč'* is imperfective and *smoč'* is perfective. So far, works on Slavic aspect and modality were focusing either on the aspect of the modal complement (Šmelev&Zaliznjak 2006) or on the aspectual relationship of the modal verbs (Choi 1999). We will further develop the idea that Russian aspect in some cases helps to solve lexical ambiguity of the modal. Yet, we will show that two factors should be taken into consideration: the aspectual type of the modal itself and of its verbal complement and the verbal class of the complement.

As far as aspectual types are concerned, we can have four possibilities:

1. IPFV MOD + IPFV INF (both verbs are imperfective)  
(1) Ona mogla emu zvonit'  
she NOM can IPFV PAST SgFem he Dat call IPFV INF  
'She could have called him';
2. IPFV MOD + PF INF (the modal is imperfective and the complement is perfective)  
(2) Ona mogla emu pozvonit' (no ne pozvonila)  
she NOM can IPFV PAST SgFem he Dat call PF INF  
'She could have called him' (but she didn't);
3. PF MOD + IPFV INF (the modal is perfective and the complement is imperfective)  
(3) Ona smogla emu zvonit' (každyj den')  
she NOM can PF PAST SgFem he Dat call IPFV INF  
'She was able to call him' (every day);
4. PF MOD + PF INF (both verbs are perfective)  
(4) Ona smogla emu pozvonit'  
she NOM can PF PAST SgFem he Dat call PF INF  
'She was able to call him' (one time).

The four constructions mentioned above interact with verbal classes of the complement. Relying on Vendler's (1957) classification of verbs, we distinguish between three verbal classes: states, activities/accomplishments, achievements. 'States' refer to a state or a lasting process which is not supposed to have any result. Thus, usually they do not have perfective counterparts (*l'ubit'* 'love', *nenavidet'* 'hate', *znat'* 'know'). 'Activities/accomplishments'

introduce a group of actions that can be presented as a process which is supposed to come to a final point, i.e. resultative verbs (activities are IPFV and accomplishments are PF). Quite often these are verbs that take a direct object or presuppose it (*pisat' pis'mo* (IPFV) 'write a letter' – *napisat' pis'mo* (PF); *tancevat'* 'dance' – *stancevat'* 'dance one particular dance'). Finally, 'achievements' refer to actions which cannot be presented as processes but rather denote a set of repeated actions so that every time some kind of completion is reached: *polučat pisma* (IPFV) 'receive letters' – *polučit' pis'mo/pis'ma* 'receive a letter/letters' (PF).

This work presents an analysis of all four constructions with the three main verbal types in the present, future and past tenses, based on the examples from the Russian National Corpus. Some of the conclusions are as follows:

- In the present tense contexts, the verb *moč'* usually has an epistemic reading together with a state complement (*Ty ponimaješ, čto Natalija **možet znat'** čto-to očen' važnoe dl'a nas?* 'Do you understand that Natalia may know something very important for us?'), and is more often used in a deontic meaning together with perfective activities/accomplishments (*Každyj četverg v dorogom zavedenii Golden Palace l'uboj želajuščij **možet spet'** vmeste so zvezdoj* 'Everybody who is willing **may sing** together with a star every Thursday, in an expensive place Golden Palace').
- The most complicated system is offered by the past contexts where both *moč'* and *smoč'* can be used. Constructions with state compliments are limited to epistemic readings (*I nakonec, Fok **mog čuvstvovat'** dopolnitel'nuju otvetstvennost' ot togo, čto A.D. Aleksandrov sčital seb'a ego učeníkom* 'And finally, Fok **could have felt** additional responsibility because of the fact that A.D. Alexandrov considered himself to be his pupil'), constructions with activities/accomplishments have a counterfactual reading in Construction 2 (*A ved' ja **mog pozvonit'** Malickomu i predupredit' ob opasnosti ešče nočju!* 'Yet, I could have called Malickij and warned him about the danger during the night!') and epistemic reading in Construction 1 (*Vsegda predstavljaju, kto zdes' **mog pet'** kogda-to ili sidet' v etom zale* 'I always imagine who **could have sung** here once or could have sat in this hall'). Constructions 3 and 4 refer only to alertic contexts.

Thus, the modal interpretation of aspect depends not only on the verbal complement, but also on the modal itself and the verbal class of the complement. Underestimation of the last factor may lead to different conclusions in determining the standard modal interpretation of aspect.

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## The semantics of tense and aspect in Kala Lagaw Ya

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Kala Lagaw Ya (KLY) is the language of the Western Torres Strait islands, with two main dialects centred around Saibai Island and Mabuiag Island. It exhibits complex tense-aspect marking involving both “metrical” tense distinctions and aspectual distinctions, and the extent of dialectal difference in the semantics and pragmatics of tense-aspect marking remains an open question (e.g. cf. Bani & Klokeid 1971 on Mabuiag and Kennedy (1985) on Saibai).

Little work has been done on the semantics of verbal inflections in this language, with the most elaborated descriptive work on tense and aspect to date being Kennedy (1985a,b). Thus the current paper begins by describing the systems in each dialect, based on the author’s field notes and a consideration of tense-aspect marking in a corpus of 19 oral narratives, and building on previous work on reference and episodic structure in these narratives (Kim, Stirling & Evans 2001, Stirling 2008).

The main focus of the paper is then to outline an appropriate semantics for the tense-aspect system in Kala Lagaw Ya. Several key questions will be addressed. First, how to we incorporate a semantics of so-called “metrical” tense into our account of tense and aspect in a language such as this one? The “metrical” tense system marks distinctions such as “last night past”, “yesterday past”, “remote past” as opposed to future tense distinctions such as “near future”, “tonight future”, “bye and bye future”, which as expected are less elaborated than the past tense distinctions. However, the resources of the “metrical tense system” are not exploited in narrative texts, which exhibit a restricted range of “narrative” past tense marking including the Remote Past Perfective, a Remote Past Imperfective, and Non-Future tense.

Second, what is the meaning of the Remote Past Imperfective which occurs very commonly in these narrative texts? Preliminary work has suggested that the Remote Past Perfective functions as the default framing tense, with the more immediate Non-Future form and the Remote Past Imperfective tending to be used in “peak episodes” (Labov & Waletzky’s (1967: 34) narrative “highpoints”, characterised by extensive “evaluative” marking). However, the correlation between peak episodes and choice of non-remote perfective tense-aspect is not complete. In particular, the use of non-remote perfective tense-aspect is more widespread. This paper considers what description of the meaning of the Remote Past Imperfective can be given which would account for both the “highlighting” uses and the more typical uses to e.g. describe situations as on-going.

An example of the use of both the Non-Future forms (NF) and Imperfectives forms (IMP and RPI) in a highlight episode is given below:

**Kazin senab thonara koey may puydhan.**

|           |           |         |      |     |             |
|-----------|-----------|---------|------|-----|-------------|
| Kazi+n    | senab     | thonara | koey | may | puydha+n.   |
| child+ERG | 3sfRD+DEM | time    | big  | cry | sing.out+NF |

The child cries out.

**Kazin pamoeyka may puydhan apuwan yan wadhar.**

Kazi+n            pamoey+ka    may    puydha+n  
child+ERG    cont.cry+IMP cry    sing.out+NF

apu+wan            yan            wadha+r.

mother+ERG in.vain            stop+RPI

The child keeps on crying, the mother can't stop her.

**Apuwan yan wadhar,**

apu+wan            yan            wadha+r.

mother+ERG in.vain stop+RPI

The mother can't stop her,

**yan mumar**

yan            muma+r

in.vain stop.tears+RPI

In addressing these questions, this paper will thus consider the pattern of tense-aspect marking in KLY narratives in detail, teasing out the extent to which it reflects the marking of distinctions in aspectual meaning and the extent to which it can be explained by discourse-pragmatic considerations.

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# Italo-French comparison in the semantics of subjunctive mood

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The subjunctive mood is used mainly in the subordinated clause.

In both French and Italian, several categories of verbs used in matrix clause claim subjunctive mood to verb of subordinated clause ; such as to express wishes, commands, emotion, possibility, judgement, opinion or necessity.

Nevertheless, the usage in the both languages has several differences. Statistically, Italian uses the subjunctive mood more frequently. This is a sampling from Euro Parliament parallel corpus[1].

| tense                 | French | Italian |
|-----------------------|--------|---------|
| present, past         | 6,219% | 7,274%  |
| imperfect, pluperfect | 0,230% | 1,127%  |

(each number is percentage on the whole corpus, about 40 million of words.)

What makes this difference ? Considering several dictionaries [2][3], I found that a category of verbs does not claim subjunctive mood to verb of subordinated clause in French only. For example, while Italian verb *pensare* claims subjunctive mood to the verb of subordinated clause, French counterpart *penser* claims subjunctive mood only when matrix clause has negative polarity. This type of verbs are followings : *pensare/penser*, *credere/croire*, *giudicare/juger*, *immaginare/imaginer*, *supporre/supposer*, *sperare/espérer*, *dubitare/douter*(— *si*), *sospettare/soupçonner*, *essere rare/être rare* *sembrare/sembler* and so on.

As the examples, these sentences show the difference between the two languages :

- (1) (fr) Marie veut que Anne **vienne**. (SUBJ)  
(it) Maria vuole che Anna **venga**. (CONG)
- (2) (fr) Marie croit que Anne **viendra**. (IND)  
(it) Maria crede che Anna **venga**. (CONG)

From the point of view of formal semantics, the expression of (1) is followings.

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$$(3) \quad \text{want}'(m, \wedge \exists x(\text{anne}'(x) \wedge \text{Fcome}'(x))).$$

Here,  $\wedge$  is the intension operator and  $\text{F}$  is the future operator.

Philosophers call (3) **de dicto** reading. Generally speaking, verbs like *vouloir/volere* claim **de dicto** reading. They take the intension of subordinated clause as their term. Thus, the expression (3) is appropriate for the sentences in (1).

As opposed to (1), the both languages have different moods in (2). Italian sentence must have the same **de dicto** reading and have semantics as :

$$(4) \quad \text{believe}'(m, \wedge \exists x(\text{anne}'(x) \wedge \text{Fcome}'(x))).$$

French subordinated sentence has the indicative mood. This phenomenon suggests that this class of verbs has **de re** reading, whose semantics can be written as :

$$(5) \quad \exists x(\text{anne}'(x) \wedge \text{believe}'(m, \wedge \text{Fcome}'(x))).$$

Here, the scope of the intension operator is limited only the predicate *come'*.

Thus, I suppose that the mood of verb in the subordinated clause obeys the opacity (of Whitehead and Russell) of its subject in French. Under this supposition, the distribution of moods can be explained well.

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## Negation and degrees of likelihood in discourse: the Nganasan mood and case

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The interaction between TAM, case, and negative moods is an unstudied linguistic area that this contribution wishes to open with new findings from Samoyedic.

The complexity of the meaning of negative sentences in natural languages is in sharp contrast with the simplicity of logical negation. Logical negation renders a proposition false; however, much more complex semantics is witnessed in less discussed expressions of negation, involving ‘without’, *-less*, or *un-*, illustrated in (1), (2), (3) and (4).

- (1) How to make blood appear on body without any wound.
- (2) Halloween Trick: How to Make Blood Appear Without Hurting Yourself (or Others).
- (3) Brutal killing of ‘defenseless old lady’.
- (4) She is still unmarried and has two kids.

In these Internet illustrations, the lack of referents, properties, or events is paired with additional conditions on the discourse. Blood is highly likely to be produced by wounds and wounding; if there appears a killer, not otherwise, one is highly likely to be in need of defense; one is likely to be married only from a certain age. Further observations:

1) these conditions are only the most likely, expected ones. Blood can be produced in different ways; one may not wish to defend oneself; not all people that fit the conventional description are married; 2) negation does not directly seem to target any of these conditions even if they are part and parcel of these utterances; 3) other types of negated sentences do not rule out these conditions. *He is not married* triggers a meaning that there is a likelihood of marriage in this situation; the likelihood has a lower degree.

There are two main problems that my contribution wishes to address: 1) the status of the likelihood (implicature or presupposition), especially in languages where the distinction appears to be grammaticalized; 2) the status of this phenomenon at the syntax/ semantics/ pragmatics interface. In English, one could argue for lexical semantic encoding (at the entries *without*, *defenseless*, *unmarried*). However, it is not wise to consider this option in languages with more elaborate mood/case systems, where similar content can be expressed by moods and case. The Uralic grammatical systems with approximately ten moods contain negative moods (Samoyedic, the abessive mood), whereas the Uralic languages with rich cross-categorial case contain semantic cases expressing negative content (Finnic, abessive/caritive case). For instance, mood and case appear in the negation system alongside with a negation verb (5) in Nganasan, which also has a designated case (caritive, (6)) and mood (abessive, (7)) to express negation.

- |     |  |            |              |         |
|-----|--|------------|--------------|---------|
| (5) | mənə                                       | d'esɪ-mə   | kūmaa-δu     | d'aŋku. |
|     | I  | father-1SG | knife-3SG    | is-not  |
|     | ‘My father does not have a/his/the knife.’ |            |              |         |
| (6) | mənə                                       | d'esɪ-mə   | kūmaa-gial'i | iču.    |
|     | I  | father-1SG | knife-CAR    | be.3SG  |
|     | ‘My father does not have a/any knife.’     |            |              |         |

The interesting difference between (5) and (6) concerns the likelihood or expectation of the affirmative situation (my father has a knife) in the given discourse conditions. In both situations, the father is expected or likely to have a knife; the sentences with the divergent negation strategies differ in the degree of expectation or likelihood. In the possessive negative sentence with the negative verb *dʌŋku* in (5), the predicament of the father is not likely to lead to serious consequences (no harm, no exclusion from further action), so the degree of expectation of having a knife in this situation is low. However, in case of caritive negation in (6), the father is in a situation where it is not likely that he is successful if he does not have a knife. The father may be defenseless, or excluded from further action. In sum, the strength of expectation about the affirmative counterpart of the sentence (having a knife) in the given situation is of a higher degree in example (6) with the caritive construction, compared to example (5) with a negation verb.

In case of the abessive mood, the strength of expectation or degree of likelihood extends to events. Example (7) denotes an event that is expected or likely to happen, which is confirmed by the compatibility with the genitive first person singular negative polarity particle. Likelihood and expectations explain another observation about the constraints on the form, namely, its correspondence to the negation of aorist as illustrated in (8).

- (7)    mənə    ɲɪtənə                    kona-mətumɪʔə-m                    basu-dʌ.  
          I           yet.not-GEN.1SG   go-ABES-1SG                    hunt-INF  
          ‘I have not gone to hunt yet.’
- (8)    mənə    kuəgunu kona-ʔa-m    basu-dʌ  
          1SG       already   go-AOR-1SG   hunt-INF  
          ‘I have gone to hunt already.’

On the basis of these data I will present my arguments for the following points:

- 1) the various strategies of negation constitute a system that can be explained via discourse properties (as claimed for Swahili by Contini-Morava 1989)
- 2) I explain the choice between forms in terms of the degree of likelihood and strength of the expectation in the situation represented by the corresponding affirmative sentence
- 3) a higher degree of likelihood corresponds to the abessive/caritive negation in Finnic and Samoyed (and the lexical-derivational means of expressing negative content in languages such as Hungarian or English); a lower degree corresponds to the standard negation with a negation particle, clitic, or verb
- 4) these meanings belong to the presuppositional part of the discourse representation
- 5) this account may explain interactions with tense and aspect if we can pin down the exact presuppositional import of the polarity particles
- 6) a lexicalist grammar such as LFG (Bresnan 2001) can deal with the interface by encoding the meaning content at the individual lexical entries. Entries are inserted in their fully inflected form at the constituent structure nodes, and mapped to the functional structure which is interfacing with semantic and discourse structures.

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## Scalar and nonscalar features in the Estonian aspectual lexicon

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This presentation proposes a scale-based account of the classification of Estonian transitive verbs. The verb's scalarity is specified in the lexical entry, while the nature of scale (open or closed) is specified by the object case. The proposal explains how verbs and case mutually constrain the aspectual interpretation in a clause, and why some combinations of verb and case are ruled out.

The relics of the earlier, spatial (spatiotemporal) part-whole based marking system combined with scale-based case marking require an account of verb classes where scale-based and spatiotemporal measure-based NP marking are teased apart. **Verbs** specify scale and measure features. The presence of the scale feature may but need not be related to the presence of an overt related thematic (or measure) argument in Estonian. The measure feature in the lexical entry represents the historically motivated lexicalized spatial or temporal measure. The specification of this feature can be also compositionally derived, since in LFG, features may be underspecified (having values or default values), or specified (positive, negative). In my account, if the feature is specified as positive, then the feature must co-occur with an additional feature specifying the type of scale or measure. **Case** is treated as a semantic 'constructive' case in LFG. It specifies additional information in the course of unification. The **total case** may add the additional feature specification, the values CLOSED ([0,1]) for the scale feature or SPECIFIED for the measure feature. More specifically, the feature specification of the total case contains the values ( $\uparrow$ SCALE)=+, ( $\uparrow$ SCALE SPECIFICATION) = CLOSED and ( $\uparrow$ MEASURE)=+, ( $\uparrow$ MEASURE SPECIFICATION) = SPECIFIED. **Partitive** appears with any other type of objects, with nonscalar predicates and scalar predicates with an open scale ([0,1)). The partitive case excludes the values ( $\uparrow$ SCALE)=+, ( $\uparrow$ SCALE SPECIFICATION) = CLOSED in object marking.

### 1. There are two classes of STATIVE VERBS.

1.a. ASPECTUAL STATIVE PREDICATES have **partitive objects** and are **nonscalar**, but their temporal measure can be 1) lexically specified as negative or 2) underspecified. Features with negative values cannot be further specified in the unification at the f-structure; unvalued features may but need not be specified by other elements in syntax, e.g.,

- alahindama* 'underestimate' ( $\uparrow$ SCALE)=-, ( $\uparrow$ MEASURE)=-  
(1) *Mari alahindas Toomast.*  
M[NOM] underestimate-3S.PAST T.PART  
'Mari (has) underestimated Toomas.'  
*põdema* 'be sick, suffer from' ( $\uparrow$ SCALE)=-,  
( $\uparrow$ MEASURE)=+, ( $\uparrow$ MEASURE SPECIFICATION)= UNSPECIFIED  
(2) *Mari põdes grippi.*  
M[NOM] be-sick-with-3S.PAST flu.PART  
'Mari had flu.'

1b. MEASURE STATIVE PREDICATES have **total objects** and are **nonscalar**. Their spatial measure is specified lexically, e.g., *moodustama* 'make up, form'.

- ( $\uparrow$ SCALE)=-, ( $\uparrow$ MEASURE)=+, ( $\uparrow$ MEASURE SPECIFICATION)= SPECIFIED  
(3) *kui 1993. aastal moodustas viimaste osakaal kooseludest tervikuna neljandiku (24%) ...*  
if in 1993 comprise latter.GEN proportion[NOM] family-ELA total-ESS fourth.TOT 24%  
'If in 1993, the proportion of the latter made up one fourth of the total of couples living together...'

**2. ACTIVITY verbs appear exclusively with partitive objects**, and can appear with **total case marked measure adjuncts**. They are **nonscalar**, their measure being underspecified; e.g., *vaatama* 'observe' ( $(\uparrow\text{SCALE})=-, (\uparrow\text{MEASURE})$ ).

In a VP, the feature unification of case and the verbs in the sentence is specified:

- (4)  $(\uparrow\text{SCALE})=-, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{SPECIFIED}$   

|             |               |              |              |                |
|-------------|---------------|--------------|--------------|----------------|
| <i>Mati</i> | <i>vaatas</i> | <i>filmi</i> | <i>terve</i> | <i>tunni</i> . |
| M[NOM]      | watch-3S.PAST | film.PART    | whole.TOT    | hour.TOT       |

'Mati was watched a/the film, Mati was watching a/the film for an hour.'

**3. ACCOMPLISHMENT PREDICATES** appear with **partitive** or **total objects**, they may appear with total case marked measure adjuncts, and they are **scalar** (nonsalar in the progressive-like uses). Their scale and measure features are lexically underspecified:

$(\uparrow\text{SCALE}), (\uparrow\text{MEASURE})$

A VP with an accomplishment predicate has the following feature unification combinations with the patterns of case marking.

3a. TOTAL OBJECTS:  $(\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{CLOSED}, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{UNSPECIFIED}$

- (5) 

|              |                 |               |                |
|--------------|-----------------|---------------|----------------|
| <i>Takso</i> | <i>sõidutas</i> | <i>Peetri</i> | <i>edasi</i> . |
| taxi[NOM]    | drive-3S.PAST   | Peeter.TOT    | further        |

'The taxi took Peeter five kilometers.'

3b. PARTITIVE OBJECT, TOTAL ADJUNCT:

$(\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{OPEN}, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{SPECIFIED}$

- (6) 

|              |                 |                |                         |                      |
|--------------|-----------------|----------------|-------------------------|----------------------|
| <i>Takso</i> | <i>sõidutas</i> | <i>Peetrit</i> | <i>viis</i>             | <i>kilomeetrit</i> . |
| taxi[NOM]    | drive-3S.PAST   | Peeter.PART    | five.TOT kilometer.PART |                      |

'The taxi took Peeter five kilometers.' (and that was not the end destination)

3c. TOTAL OBJECT, TOTAL ADJUNCT:

$(\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{CLOSED}, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{SPECIFIED}$

- (7) 

|              |                 |               |             |                            |
|--------------|-----------------|---------------|-------------|----------------------------|
| <i>Takso</i> | <i>sõidutas</i> | <i>Peetri</i> | <i>viis</i> | <i>kilomeetrit edasi</i> . |
| taxi[NOM]    | drive-3S.PAST   | Peeter.TOT    | five.nom    | kilometer.PART             |

'The taxi took Peeter five kilometers.' (and that was the end destination)

3d. PARTITIVE OBJECT, TOTAL ADJUNCT:

$(\uparrow\text{SCALE})=-, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{SPECIFIED}$

- (10) 

|              |                 |                |             |                            |
|--------------|-----------------|----------------|-------------|----------------------------|
| <i>Takso</i> | <i>sõidutas</i> | <i>Peetrit</i> | <i>viis</i> | <i>kilomeetrit edasi</i> . |
| taxi[NOM]    | drive-3S.PAST   | Peeter.PART    | five.nom    | kilometer.PART             |

'The taxi took Peeter five kilometers.' (we do not know if the location was the end destination)

**4. ACHIEVEMENTS** may have either **total** or **partitive objects** in VPs.

4.a. TOTAL OBJECT ACHIEVEMENT VERBS, e.g., *leidma* 'find'

$(\uparrow\text{SCALE}), (\uparrow\text{MEASURE})=-$   
 $((\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{CLOSED})$  (default constraint)

The unification in a VP, at the f-structure:

$(\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{CLOSED}, (\uparrow\text{MEASURE})=-$

- (11) 

|                |              |
|----------------|--------------|
| <i>Leidsin</i> | <i>vea</i> . |
| find-PAST-1S   | mistake.TOT  |

'I found a/the mistake.'

4.b. PARTITIVE OBJECT ACHIEVEMENT VERBS, e.g., *märkama* 'notice'

$(\uparrow\text{SCALE})=+, (\uparrow\text{SCALE SPECIFICATION})=\text{OPEN}, (\uparrow\text{MEASURE})=+, (\uparrow\text{MEASURE SPECIFICATION})=\text{SPECIFIED}$

- (12) 

|                 |               |
|-----------------|---------------|
| <i>Märkasin</i> | <i>viga</i> . |
| notice-PAST-1S  | mistake.PART  |

'I noticed a/the mistake.'

In sum, the scale and measure features determine the verb classes and case marking.

## On the Grammaticalization of an Anterior-perfective Aspect Marker in Thai

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It has been observed typologically as well as diachronically that ‘finish’ verbs in languages tend to grammaticalize to convey aspecto-temporal meanings of anterior, perfective, and simple past. (Bybee, Perkins & Pagliuca 1994) The ‘finish’ verb in Thai also conforms this grammaticalization pathway. It has been grammaticalized from an intransitive verb meaning ‘finish/be.finished’ into a postverbal auxiliary indicating the aforementioned aspecto-temporal meanings. Moreover, it is found that the form in question has other grammatical functions, i.e. conjunction and discourse connective both of which convey a temporal sequential relation. However, this paper will focus mainly on the part of the grammaticalization process from the intransitive verb to the aspect marker which is the most prominent function of the form under investigation.

This paper probes into the grammaticalization of the ‘finish’ verb in Thai in accordance with Bybee et al.’s grammaticalization pathway of perfective and simple past. It will be argued in this paper that *laew45* which originally functions as an intransitive verb arrives at its new aspecto-temporal meanings of anterior when it appears as the second verb in a transitive-based result-state resultative construction which can be schematically represented as [Subj. V1 Obj. V2/*laew45*]. The intransitive verb, *laew45*, in this position denotes the change of state of the object as a result of a prior action named by the first verb in the construction. *Laew45* in this position is further grammaticalized into a postverbal auxiliary indicating anterior or perfect aspect. A dynamic situation marked by *laew45* is represented as the situation that occurred prior to the reference time and continues to or is relevant to the situation at the reference time. On the other hand, a stative situation marked by *laew45* is represented as the state that began prior to the reference time and holds at the reference time. It also carries a presupposition that the state being referred to is a new state as a result of a prior change of state situation.

### Reference

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## ‘Past’ is *irrealis* in Capeverdean tenseless sentences

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1. It is generally assumed that the base form of the verb of creoles in general and Capeverdean in particular exhibits an inherent tense feature. Roughly, dynamic verbs convey past readings, whereas stative ones convey present-like interpretations (Bickerton 1981). Pratas (2007) and Borik and Pratas (2008) assume that the difference between stative and dynamic verbs in Capeverdean is lexical, because it involves their argument structure: dynamic verbs do have an event argument, whereas statives do not. Owing to the fact that statives lack an event variable by definition that results in a present-like interpretation of (1):

- (1) *N*            **SABE**            *kabuverdianu*  
       I            know            Capeverdean  
       'I know Capeverdean Creole'

Instead, dynamic verbs have an event argument which can be converted into a temporal one by a  $\emptyset$  [+past] morpheme hosted in a Tense Phrase. Hence, the past interpretation in (2):

- (2) *N*             $\emptyset$             **KUME**            *katchupa*  
       I            Past    eat            katchupa  
       'I ate katchupa'

In Borik and Pratas's (2008) system, when the aspectual marker *ta* applies to a dynamic verbal root (e.g. *kume* 'eat'), it gives raise to a present imperfective reading (3):

- (3) *Joao*        **TA**        **KUME**            *lagosta*  
       Joao        Asp    eat            lobster  
       'Joao eats lobster'

This should support evidence for the stipulation that a  $\emptyset$  [+past] morpheme is indeed real, because the latter shares with *ta* the same syntactic position in complementary distribution.

2. However, there are counterexamples to such assumptions. As a matter of fact, when *ta* combines with a dynamic verb, also it yields a past-like reading (cf. (4), from Baptista 2002):

- (4) Era un fomi    tristi, **TA TXOMA**    pa nomi, **TA TOMA**, **TA KUME**  
       was a    hunger sad    Asp call            by name Asp take    Asp eat

'It was a terrible famine, they would call us by name, we would take (the food) and eat'

Here, the aspectual imperfective marker *ta* doesn't neutralize the past feature at all. Hence, the past imperfective reading of (4). But, then, we are left with the crucial question about the actual status of the  $\emptyset$  [+past] morpheme and its occurrence in (2), as compared either with its deletion in (3) or with the co-occurrence of *ta* in (4). Besides this, although unnoticed (if not excluded) so far, there are cases in which a stative verb can yield a past reading as well, in (5):

- (5) *Deus qu' mando -b, SABÊ*    *o qu' el fazê,*  
       God who send    you    know    what    that he make  
       'God knew what he made when he sent you (to me)'

[Nika Sicile and Teofilo Chantre, 1999, "Sorte", in Cesaria Evora, *Café Atlantico*, ed. Lusafrika]

Moreover, we can observe dynamic verbs yielding non-past interpretations, that is, a future-like reading (i.e. *irrealis*), as in (6):

- (6) *N ben kunvenda ozé un kezemente. Nhe fi Izé MA kel filha de Medelena*  
       I come invite    you a wedding    Poss. son Izé marry    the daughter of Madelene  
       'I've come to invite you to a wedding. My son Izé will marry the Madelene's daughter'

[from "Compede Joquim" by Cordas do Sol, Capeverdean of Barlaventu (Boavista)]

The data in (5)-(6) really challenge the current approaches. Whether (5) and (6) hold, the lexically-driven dichotomy between statives and dynamics needs to be revisited. At least under certain conditions, statives and dynamics entail the same range of temporal interpretations. In this paper, we leave aside the past readings with statives, and we address the paradoxical interpretations of dynamic verbal roots ('past' vs. 'irrealis').

3. As a preliminary assumption, we don't want to deny here that at the sentence level

dynamic verbs may receive a 'past-like' reading, preferably. That is, out of the blue, the conjunct clause '*Nhe fi Izé ma kel filha de Medelena*' in (6), repeated below as (7), it would actually yield a 'past-like' interpretation, which parallels that of (2), *contra* (6) above:

- (7) *Nhe fi Izé MA kel filha de Medelena*  
 Poss. son Izé marry the daughter of Madelene  
 'He has married Madelene's daughter'

By the way, we observe that isomorphism between 'past-like' and the irrealis verbal forms are crosslinguistically well attested – (cf. Iatridou (2000) and references quoted therein):

- (8) I **ATE** a lobster, yesterday.  
 (9) I wish I **ATE** a lobster.

Just like the future-like reading in (6), the counterfactual in (9) rests on the domain of the *irrealis*. This renders in a sense (8)-(9) a minimal pair with respect to (6)-(7), as far as isomorphism between 'past-like' and *irrealis* verbal forms is not coincidental. In this perspective, a 'silent category approach' fails to capture the empirical generalization which draws a systematic syncretism among languages for such a range of interpretations. We agree then with Iatridou's (2000) conclusion that such a morphological syncretism points to a more fundamental property – unfortunately labelled as 'past' – which holds both for past and *irrealis* reading; excluding an event from being evaluated as real at the utterance time-point.

4. In Capeverdean, such a primitive can be morphosyntactically opaque, with no overt past operators, alias 'irrealis', as in (2) and (7). Correspondingly, the *irrealis* reading in (6) arises in the absence of a modal, nevertheless. Thus, we wonder (i) what makes a dynamic root inherently 'past' in a single sentence, as in (2) and (7), and (ii) how can the very same root be interpreted as 'irrealis' even without being under the domain of a overt modal. We are going to address the two issues in turn.

We first notice that the 'past/non-past' terminology can obscure that the so called 'temporal interpretation' has to do with Aspect too. Thus, the 'past-like' interpretation of the verbal root **MA** 'marry' in the single sentence (7), may turn out to be a perfective interpretation, rather than strictly 'past'. Looking at traditional taxonomies, we classify **MA** (as well as **KUME** in (2)) as an *accomplishment*, in which the focus is on the terminal boundary of the event being described. In this sense, its telic *aktionsart* combined with the quantization of the object (i.e. *kel filha de Medelena*) can be responsible for a bounded reading – in the spirit of *aspectual compositionality*. Although a bounded reading is not synonymous with perfective aspect (as it is commonly acknowledged that aspect and telicity are two distinct notions), languages with poor morphology may exploit the inherent aspectuality of the verb in the absence of other linguistic clues. Thus, out of the blue, the inference of perfectivity in (7) acts as a right-boundary which locates the event *prior to* the time-point of the utterance (i.e. the left-boundary), roughly resulting in a 'past-like' interpretation. Since this inference arises through a process of conversational implicature (the principle of informativity), it can be neutralized in a context providing more information. Now, the propositional content of the Topic sentence in (6) *N ben kunvenda ozé un kezemente* – inviting someone to a wedding – implies that the wedding at hand has not yet been occurred, as a common sense suggests. **KUNVENDA** is a future-oriented predicate and it requires that its argument *un kezemente* being an event occurring *later than* the utterance time-point, i.e. within the *irrealis* domain. Hence, the inferred future-like reading of **MA** in (6) is inherited from the *irrealis* propositional content of the Topic which acts as a Modal, excluding from the utterance time the possible worlds in which the event (the marriage) would take place.

In our analysis a mismatch between syntax and morphology is excluded, in favour of a unified morphosyntactic component. In this way, we have taken into accounts a wider range of empirical data, with a more economical syntactic component and a deeper understanding of the interface mechanisms of temporal interpretations of Capeverdean verbal roots.



## Degrees and endpoints of change: evidence from Turkic

**Phenomenon.** In this paper, I examine two types of verbs in Turkic languages (Tatar, Chuvash, Karachay-Balkar; due to space limitations I only provide examples from Karachay-Balkar), degree achievements like ‘heat’ in (1) and manner of motion verbs like ‘run’ in (2).

- (1) a. kerim suw-nu { eki minut-xa || \*eki minut } on gradus-ta zilit-xan-di.  
 K. water-ACC 2 min-DAT 2 min 10 degree-LOC heat-PFCT-3SG  
*Kerim heated the water by 10 degrees {in two minutes || \*for two minutes}.*  
 b. kerim suw-nu { eki minut-xa || eki minut } alty on gradus-xa dere zilit-xan-di.  
 K. water-ACC 2 min-DAT 2 min 6 10 degree-DAT to heat-PFCT-3SG  
*1. Kerim heated the water to 60 degrees {in two minutes}.*  
*2. Lit. Kerim heated the water to 60 degrees {for two minutes}, (but stopped when the water was 50 degrees).*
- (2) a. kerim züz meter { eki minut-xa || \*eki minut } cap-xan-di.  
 K. 100 m 2 min-DAT 2 min run-PFCT-3SG  
*Kerim ran 100 m {in two minutes || \*for two minutes}.*  
 b. kerim şqola-ğa { eki minut-xa || eki minut } cap-xan-di.  
 K. school-DAT 2 min-DAT 2 min run-PFCT-3SG  
*1. Kerim ran to the school in two minutes..*  
*2. Lit. Kerim ran to the school for two minutes (but then changed his mind and went to the cinema).*

These verbs form a natural class as to how their telicity interacts with expressions that refer to a *degree of change* (e.g., ‘by 10°C’ in (1a)) and to an *endpoint of change* (e.g., ‘to 60°C’ in (1b)). Like in English (see (3a)-(4a)), if the degree of change is specified by a measure phrase, the verbal predicate is *obligatorily telic*. In contrast, unlike in English (see (3b)-(4b)), *both telic and atelic interpretations* are compatible with an overt specification of the endpoint, either of motion, (2b), or of change in a gradable property, (1b).

- (3) a. John ran 100 meters {in ten seconds || \*for ten seconds}.  
 b. John ran to the train station {in ten minutes || \*for ten minutes}.
- (4) a. John heated the water by 10°C {in ten minutes || \*for ten minutes}.  
 b. John heated the water to 70°C {in ten minutes || \*for ten minutes}.

Given examples like (1)-(2), we have to account for the precise range of their interpretations as well as for cross-linguistic variation in how degrees and endpoints determine telicity.

**Analysis and discussion.** I built on and extend Kennedy and Levin’s (2002) approach to degree of change predicates, accommodating a number of insights from Piñon’s (2008) analysis of aspectual composition.

The overall idea is: Expressions like ‘by 10°C’ in (1a) and ‘100 m’ in (2a) saturate the degree of change argument position, obligatorily creating quantized event predicates. But expressions introducing endpoints of change (e.g., ‘to 60°C’ and ‘to the school’ in (1b)-(2b)) create new gradable properties – properties of being 60° hot and of being at school. On these properties, both telic and non-telic event predicates can be built.

The crucial idea — that properties like ‘be 60° hot’ ‘be located at the endpoint of a path’ are gradable in Balkar — is based on the observation that in examples like (1) the water can reach not only 60° as a result of its participation in the event, but also some temperature lower than 60°. That is, being 60° hot is a property that an individual can possess to a maximal or *less than maximal* degree. This amounts to suggesting that Balkar manifests the whole family of gradable properties of the form ‘60° hot’, ‘70° hot’, ‘hot to some extent’, etc., rather than a single property ‘hot’. If this suggestion is correct, gradable properties of type <e, <i,d>> are derived from more basic (and more complex) expressions of type <n, <e, <i, d>>> by saturating their *quantity argument* (of type n). (This argument can be thought of as roughly corresponding to Piñon’s (2008) *extent argument*.) Therefore, I assume (6a-b) as representations for ‘heat’ and ‘run’, where relevant gradable properties are HOT(n) and PATH(n). ((5)-(6) are based in the INCREASE relation from Hay et al. 1999, Kennedy, Levin 2002 rather than on a measure of change function from Kennedy, Levin 2008, but this choice does not affect my line of reasoning.)

- (5)  $\lambda n \lambda y \lambda x \lambda d \lambda e [agent(x)(e) \wedge theme(y)(e) \wedge increase(hot(n))(y)(d)(e)]$   
 (6)  $\lambda n \lambda x \lambda d \lambda e [agent(x)(e) \wedge run(e) \wedge increase(path(n))(x)(d)(e)]$

If the degree of change is overtly specified, as in (1a)-(2a), but the endpoint of change is not, the quantity argument gets existentially bound, while the degree of change argument position is saturated by an overt expression like ‘100 meters’ or ‘10 degrees’, yielding finally event predicates in (7a-b). The predicate in (7a) is quantized, hence telic, since no proper part of an event where the temperature of water increases by 10 degrees is an event where the temperature of water increases by 10 degrees (similarly for (7b)).

- (7) a.  $\lambda e \exists n [\text{agent}(\text{Kerim})(e) \wedge \text{theme}(\text{water})(e) \wedge \text{increase}(\text{hot}(n))(\text{water})(\mu_t(10^\circ\text{C}))(e)]$   
 b.  $\lambda e \exists n [\text{agent}(\text{Kerim})(e) \wedge \text{run}(e) \wedge \text{increase}(\text{path}(n))(\text{Kerim})(\mu_p(100 \text{ m}))(e)]$   
 where  $\mu_t$  and  $\mu_p$  are functions that map  $^\circ\text{C}$  and  $\text{m}$  onto degrees, real numbers between 0 and 1.

Expressions referring to the endpoint of change in (1b)-(2b) saturate the quantity argument position, yielding a relation between two individuals, events and degrees in (8a-b). Since gradable properties  $\text{HOT}(60^\circ\text{C})$  and  $\text{PATH}(\text{TO SCHOOL})$  allow for maximal values, they map individuals and times onto (at least upper) closed scales. For properties associated with positive degrees, this is made explicit by the axiom in (9).

- (8) a.  $\lambda y \lambda x \lambda d \lambda e [\text{agent}(x)(e) \wedge \text{theme}(y)(e) \wedge \text{increase}(\text{hot}(60^\circ\text{C}))(y)(d)(e)]$   
 b.  $\lambda x \lambda d \lambda e [\text{agent}(x)(e) \wedge \text{run}(e) \wedge \text{increase}(\text{path}(\text{to school}))(x)(d)(e)]$   
 (9) Axiom.  $\forall H \forall x \forall t \forall n \forall d [(H(n))(x)(t) = d \rightarrow d \in ]0,1] \vee d \in [0,1]$   
 (Gradable properties with a fixed value of the quantity argument are associated with (upper) closed scales.)

In Balkar, if an event involves change along a closed scale, the degree of change can but need not be maximal. We have already seen this for ‘run to the school’ and ‘heat to  $60^\circ$ ’. Additional evidence comes from incremental theme predicates like ‘read a paper’, (10). A scale associated with ‘read a letter’ is at least upper closed, since a letter can be read to the maximal degree. As (10) indicate, the reading event can reach the maximal degree, but can also terminate before that degree is attained.

- (10) kerim {eki minut-xa || eki minut} qaxit-ni oqu-xan-di.  
 K. 2 min-DAT 2 min-DAT letter read-PFCT-3SG  
*Kerim read the letter {in two minutes || for two minutes}.*

I suggest that telic and atelic readings of (1b), (2b), and (10) are derived by a degree binding operator in (11) and a degree maximizing operator in (12)-(13) (cf. corresponding Piñón’s (2008) operators; Piñón integrates them into his analysis in a considerably different way, however.)

- (11)  $\| D^\exists \| = \lambda R_{<d, <v,t>} \lambda e \exists d. R(d)(e)$   
 (12)  $\| D^1 \|$  is only defined if a maximal degree of change,  $d_{\max}$ , is defined.  
 When defined,  $\| D^1 \| = \lambda R_{<d, <v,t>} \lambda e. R(d_{\max})(e)$   
 (13) For an individual  $x$ , event  $e$ , and a gradable property  $G$  such that  $G$  maps individuals and times onto positive degrees,  $d_{\max}$  is only defined if  $G$  is associated with a totally or upper closed scale.  
 When defined,  $d_{\max} =^{\text{df}} \text{id. max}((G(x))(\text{beg}(e)) + \text{max}(d) = 1$   
 where  $\text{max}(d)$  is a right bound of  $d$ , if  $d$  is a positive degree.

Applying operators in (11)-(12) to relations in (8a-b) after saturation of individual argument positions yield event predicates in (14)-(15). For instance, (14a) denotes events where the property of being  $60^\circ$  hot increases by some degree; while (14b) is an event predicate that contains events where the same property changes to the maximal degree. It can be shown that the latter is quantized, hence telic, but the former is not, and the same reasoning applies to (15a-b).

- (14) a.  $\lambda e \exists d [\text{agent}(\text{Kerim})(e) \wedge \text{theme}(\text{water})(e) \wedge \text{increase}(\text{hot}(60^\circ\text{C}))(\text{water})(d)(e)]$   
 b.  $\lambda e [\text{agent}(\text{Kerim})(e) \wedge \text{theme}(\text{water})(e) \wedge \text{increase}(\text{hot}(60^\circ\text{C}))(\text{water})(d_{\max})(e)]$   
 (15) a.  $\lambda e \exists d [\text{agent}(x)(e) \wedge \text{run}(e) \wedge \text{increase}(\text{path}(\text{to school}))(x)(d)(e)]$   
 b.  $\lambda e [\text{agent}(x)(e) \wedge \text{run}(e) \wedge \text{increase}(\text{path}(\text{to school}))(x)(d_{\max})(e)]$

Finally, I suggest that the difference between languages like Balkar and English can be accounted for as follows. Unlike in Balkar, in English endpoints of change do not create gradable properties that can be attained to a less than maximal degree. Rather, they are interpreted as degrees attained at  $\text{END}(e)$ , as in (16):

- (16)  $\lambda e [\text{agent}(\text{boy})(e) \wedge \text{theme}(\text{water})(e) \wedge \text{hot}(\text{water})(\text{end}(e)) = \mu_t(60^\circ) \wedge \exists d [\mu_t(60^\circ) = \text{cold}(\text{water})(\text{beg}(e)) + d]]$

If we guarantee that the temperature increases incrementally in the course of the event (see Piñón 2008 for a specific implementation), the water will not be  $60^\circ$  in any proper part of an event from the extension of (16). The predicate will thus obligatorily be quantized.

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## Event structure shifts and morphological resources

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A derivational relationship often exists between words describing related state, change of state (COS), and causative COS meanings (1). Such paradigms may differ in which member is basic. Thus the morphology in (1) suggests the paradigm in (1a) could be based on the causative verb *break*, while that in (1b) is derived from the adjective *loose* (Levin 1993, Koontz Garboden 2005). Yet both paradigms span the same event structural space. In contrast, for a parallel set of meanings, Mandarin shows only alternation between state and COS (2). The stative verb *gan* ‘dry’ cannot be causative (3a). Rather, any causative meaning must be encoded in a resultative verb compound (RVC), with another verb describing the causing action (3b). In this paper, I argue that the reason for this gap in Mandarin is based in morphology. Specifically, the lack of overt morphology indicating the shift, e.g. between state and COS, prohibits a further shift from COS to causation. The hypothesized relationship between event structure shift and morphology is stated as (4).

- (1) a. The glass is broken./Sandy broke the glass./The glass broke.  
b. The knot is loose./Sandy loosened the knot./The knot is loosened.
- (2) a. wanpan dou hen gan.  
dishes all very dry  
The dishes are all dry. (State)  
b. wanpan gang gan  
dishes just dry  
The dishes have just dried. (COS)
- (3) a. \*Sanmao gan-le wanpan  
Sanmao dry-PERF dishes  
Intended: Sanmao dried the dishes.  
b. Sanmao ca-gan-le wanpan.  
Sanmao wipe-dry-PERF dishes  
Sanmao wiped the dishes dry.
- (4) No more than one event structural shift can apply to a word unless indicated by overt morphology.

According to (4), the paradigm in (1a) is allowed because the adjectival status of *broken* is indicated by the participial form (albeit subject to irregularities). (1b) is allowed because the shift to COS, with the concomitant category change to verb, is indicated by *-en* when phonological conditions are met. In morphologically impoverished Mandarin, only one shift — to COS — is allowed for stative *gan* ‘dry’. Lack of morphological indication prevents a further causative shift. In many languages, related state, COS, and causative meanings are associated with a single root morpheme, but distinguished by affixes, drawing the lines in the different ways seen in (1) above. Some languages distinguish all three classes, e.g. O’odham, Warlpiri (Hale and Keyser 1998); some show the meaning-conditioned division described above for English, e.g. Tongan (Koontz Garboden 2007). All the paradigms described in the works mentioned here, however, are consistent with (4).

An important assumption made above is that a shift from state to COS does exist in Mandarin. That is, the COS meaning in (2b) is not due to say, pragmatic coercion (Koontz Garboden 2007). This can be shown by comparing property-denoting stative verbs (Mandarin has no clear adjective class) such as *gan* ‘dry’ with the ‘coverbs’ *zai* ‘be at’ and *dao* ‘arrive/to’ (5). Mandarin coverbs encode spatial notions, and are so named because they show properties of both verbs and adpositions. (5) shows that, regardless of whether the adverb *gang* ‘just’ is present, the directional *dao* ‘arrive/to’ remains directional, and the locational coverb *zai* ‘be at’ even disallows the adverb.

- (5) a. Sanmao jintian (gang) dao jia  
Sanmao today just arrive home  
Sanmao (just) arrived home today.  
b. Sanmao jintian (\*gang) zai jia  
Sanmao today just be.at home.  
Sanmao was (\*just) at home today.

In verb-coverb compounds (VCCs), coverbs also retain their aspectual class (6). While *zai* may be found in sentences with directional interpretations, this is only possible when the verb itself licenses a directional meaning, for instance with the “assume position” sense of verbs of spatial configuration e.g. *pa* ‘flop (face down)’ (7).

- (6) a. Sanmao zou-dao jie-shang.  
Sanmao walk-to street-upon.  
Sanmao walked onto the street.  
b. Sanmao zou-zai jie-shang.  
Sanmao walk-be.at street-upon.  
Sanmao walked on/\*onto the street.

- (7) Sanmao jixu/turan pa-zai di-shang.  
 Sanmao continue/suddenly flop-be.at floor-upon  
 Sanmao continued to flop / suddenly flopped (down) on the floor.

Now both RVCs and VCCs may participate in what is called a potential construction, where the negation morpheme *bu*, or the morpheme *de* ‘get’ is inserted between the component verbs, either negating or questioning the attainability of the result (8a). In similar vein, VCCs formed with the directional coverb *dao* can form a potential construction (8b). In contrast, VCCs formed with *zai* ‘be at’ cannot (9), although the verb *pa* ‘flop’ imparts a directional interpretation to the compound.

- (8) a. Sanmao **ca-bu-gan** zhe-xie wanpan b. xuexiao tai yuan, ni **zou-bu-dao** de.  
 Sanmao wipe-Neg-dry this-PL dishes school too far, 2sg walk-Neg-to DE  
 Sanmao is unable to wipe these dishes dry. The school is too far, you can’t get there on foot.

- (9) Sanmao yao teng, \***pa-bu-zai** di-shang  
 Sanmao lower.back pain flop-Neg-be.at floor-upon  
 Sanmao has pain in his lower back, he can’t flop onto the floor

The potential construction thus indicates whether the second member in a verbal compound encodes a change. Since RVCs ((3b)) allow the potential construction (8a) — like VCCs formed with *dao* ‘arrive/to’, and unlike VCCs with *zai* ‘be at’ — *gan* ‘dry’ in (3b) must denote COS, so a state-to-COS shift must be possible in Mandarin.

We saw in (3a) that *gan* has no causative counterpart, and indeed, lexical accomplishments are notoriously rare in Mandarin: the result of even such typical accomplishments such as *sha* ‘kill’ has been shown not to be entailed (Tai 2003, Chief and Koenig 2007). Interestingly, a small set of directed motion verbs such as *jin* ‘enter’, *chu* ‘exit’, *shang* ‘ascend’, *xia* ‘descend’ seem to allow a limited shift to a causative meaning (10), a point hitherto unnoticed in the literature on Mandarin. Notice that in this case there is no state/locational counterpart to this pattern: the only way to predicate location of the goods is to use *zai* ‘be at’.

- (10) a. huo jin-le guankou b. Sanmao jin-le yi pi huo  
 goods enter-PERF customs Sanmao enter-PERF one CL goods  
 The goods have entered customs. Sanmao brought in (stocked up on) some goods.

There are two ways to interpret (10). Either causative *jin* ‘bring in’ is derived from directed motion *jin* ‘enter’, or vice versa. Either way, the lack of morphological indication of a meaning shift disallows deriving a stative *jin* meaning ‘be in’ from either, or from deriving either from a stative ‘be in’. This contrasts with stative verbs, which span only state/COS meanings (11).

- |      |                  |   |                         |   |                       |
|------|------------------|---|-------------------------|---|-----------------------|
| (11) | State/Loc        |   | Change of State/Loc     |   | Causative             |
|      | <i>gan</i> ‘dry’ | → | <i>gan</i> ‘become dry’ | ↗ | ∅                     |
|      | ∅                | ↘ | <i>jin</i> ‘enter’      | ↔ | <i>jin</i> ‘bring in’ |

As noted above, in many languages where a single root is responsible for the entire semantic space of state, COS, and causation, some degree of morphological indication marking each shift is typically available (Haspelmath 1993, Hale and Keyser 1998, Koontz Garboden 2005, 2007). If the current proposal is correct, the gaps in the semantic space of the relevant paradigms in Mandarin are directly related to its morphologically impoverished nature.

Many studies of morphological paradigms encoding the state/COS/causative space are concerned with identifying the basic member of the paradigm (as above), and with how these paradigms inform lexical semantic representation. While clearly important, these goals have led to a greater focus on languages with complex morphological systems. My proposal highlights how the lack of morphology can yield insight into the limits of non-overt grammatical operations, pointing to the need to consider languages where morphology is less plentiful.

## Immediate anteriority with and without scales

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**The issue** In this paper, we examine a cross-linguistic selection of particles that express the immediate anteriority reading, i.e. they locate an event in the immediate past with respect to a reference point. They are English *just*, German *gerade* (lit. ‘straight’) and Italian *appena* (etym. ‘to pain’). All of them have other readings, but not the same among them, and in order to account for this partial overlap, we propose two different analyses and show how the shared temporal reading can result from such different characterisations. In particular, we argue that *gerade* differs insofar as it does not convey scalar information directly.

**Data** The immediate-anteriority effect is a case where a particle—in italics in (1)—narrows down the possible temporal location of an eventuality to a time preceding and close to the moment of reference, here the moment of utterance. When we consider only the host clauses in (1), the eventuality could in principle have taken place at any preceding time.

- (1) a. John has *just* arrived.
- b. Hans ist *gerade* angekommen. [German]
- c. Gianni è *appena* arrivato. [Italian]

The immediate anteriority is however only one of the possible uses of the particles. There is another reading where the particles seem to modify directly a scalar element, like *enough*. *Just* in combination with *enough* points to a value on a scale and says that the value is low (cf. 2a). The pair in (2) comes with an implicature that the possible purchases are ordered on a scale of desirability. Sentence (2b) is odd, if one considers a single scale where *caviar* is (close to) the top element and *soup* is the bottom element. The same effect obtains for *appena* (3) in the same setting, and seems to obtain for *gerade* too (4).

- (2) a. I have just enough money to buy a soup.
- b. #I have just enough money to buy caviar.
- (3) a. I soldi mi bastano appena per comprare una minestra.  
      The money to-me suffice appena for buy a soup
- b. #I soldi mi bastano appena per comprare del caviale.
- (4) a. Ich habe gerade genug Geld, um mir eine Suppe zu kaufen.  
      I have gerade enough money to me a soup to buy.
- b. #Ich habe gerade genug Geld, um mir Kaviar zu kaufen.

The pairs in (2)–(4) enhance the opposition low-high values and show the preference of the particle for combining with low positions. But the data on *gerade* are more subtle. If we consider the (a) sentences in isolation, the implicature of low desirability is still there in English and Italian, while it is not triggered in German. This suggests that the item *gerade* associates with is not necessarily understood as ordered on a scale. On the contrary, in (4a) *gerade* exhibits a non-scalar reading equivalent to ‘precisely’, not available to the other two particles.

**Discussion** We want to account for the difference in the interpretation of (2a) and (3a) vs (4a), namely the absence of scalar interpretation in the latter, and yet be able to provide an analysis for the temporal reading they share in (1). We analyse English *just* and Italian *appena* as approximators that refer to positions close to the beginning of a scale. Nothing special needs to be added for the immediate anteriority reading; all readings share the characteristic of referring to a point *p* close to the beginning of scale *S* where we locate some value *P*.

Notice that the temporal reading arises only with perfect tenses, and that the perfect introduces

the temporal reference time  $p'$  and the order constraint  $p \prec p'$ . Past/present/future perfect tenses locate  $p'$  before/at/after speech time, see (5).

(5) Ero/sono/sarò appena arrivata a casa. (I had/have/will have just arrived home)

We analyse the interval between the location of the event and the reference time as making up an equivalence class of times, adapting the proposal made by Jayez and Tovenà (2008) for *almost*. They have argued that *almost* is an approximator with argumentative properties that exploits the notion of indiscernibility of descriptions, where indiscernibility is defined as a contextual class of equivalence with respect to a variable set of conclusions. For example, *almost red* and *red* are presented by the speaker as equivalent for a given argumentative purpose, although they are ordered among themselves.

We propose that *just* and *appena* approximate in a way symmetric to the functioning of *almost*. In *almost red*, *red* is the property P that is implicated not to be attained, and in *just red*, the property P that is implicated to be just about attained, i.e. the expression points to a position in the zone of approximation to the right of it. In the temporal use, the question at issue is when the event has taken place, not whether it did, and the point at which P holds is the moment of completion of the event. The right threshold of approximation is pragmatically defined in scalar uses. We propose to identify  $p'$  with the right threshold of approximation in the temporal use, a step that results in strongly narrowing the distance between  $p$  and  $p'$ , because the interval between them must be short if we want to keep the equivalence class maximally coherent and plausible. Next, although  $p'$  is the (Reichenbachian) reference point from which the whole temporal geometry is computed, the particle assigns to  $p$  the crucial role of referent for building the equivalence class of times where a certain event holds, and then takes the interval starting at  $p$  as being (close to) the beginning of the scale/interval. The argumentative side rests on the information that the interval/class of equivalence corresponds to a low portion of the scale. The impact is straightforward in the scalar reading, see (2)–(3), where the scale is identified with the extension of a gradable property. However, it is difficult to prove in temporal terms, because the scale would correspond to the time order and any reference time introduced in the sentence is picked up by the perfect. This is also why the threshold functions as reference point.

As for *gerade*, we provide an analysis of the temporal use working from the representation of the ‘precisely’ reading that characterises the optimal match between two values, without any direct reference to an order. Note that the immediate anteriority reading in German also requires perfect tenses, as we observed for English and Italian.

Following Nishiyama and Koenig (2004), we assume perfect tenses to bring along some perfect state  $s$ , which is semantically underspecified, and whose characteristics have to be inferred pragmatically. We propose that *gerade* sets this perfect state as the optimal contextual match for characterising the reference point. There is no direct indication of temporal proximity in this case. Proximity follows indirectly from relevance, because in order to attribute a highest relevance to  $s$ , and since the properties of  $s$  depend at least partially on the event  $e$ , there may not be any intervening event that could interfere into the relation between  $e$  and  $s$ . In this way, we can account for the temporal proximity effect without using an explicit operation of approximation, as suggested for *just* and *appena*.

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## The interaction of control and aspect in Salish languages: SENĆOTEN reflexives

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### *Introduction*

This paper considers the interaction of valence and control suffixes with situation type and grammatical aspect in SENĆOTEN, a Central Salish language of Western Canada, focussing on control and non-control forms with reflexive suffixes *-sat* and *-naNət* (1). I show that these suffixes both pattern with achievements in terms of tests for situation type developed by Kiyota (2008) and Bar-el (2005). This is argued to result from the co-referentiality of subject with patient in addition to agent in reflexives (Gerds 1988, 2000).

### *Background*

Reflexive suffixes in Central Salish languages belong to a group of valence and control suffixes, numbering fourteen in SENĆOTEN (Montler 1986), which indicate the number and semantic role of a predicate's arguments. In addition, they encode the grammatical category of *control*, where control suffixes indicate that an agent has a normal degree of control over an event, and non-control suffixes indicate that the event happened accidentally or with a great amount of effort (Thompson 1985).

Recent analyses of aspect in Salish languages have argued for four or five situation types, based on various empirical tests (Bar-el 2005, Kiyota 2008). Though membership in these classes is motivated by the semantic tests, the classes are partially distinguished morphologically, based on the valence/control suffixes: according to Kiyota's testing of SENĆOTEN, predicates with control transitive *-ət* are accomplishments, and predicates with non-control transitive *-nax<sup>w</sup>* are achievements, along with unsuffixed unaccusatives. Matthewson (2004) and Bar-el et al. (2005) argue that accomplishments are derived from the unaccusative achievements by addition of the control transitive suffix, which simultaneously introduces an agent with control and introduces modality, whereby accomplishments do not entail culmination (2) and are different from accomplishments as defined in universal accounts such as Smith's (1997). This is one way they are distinguished from achievements (3), which must culminate in the real world.

Since accomplishments are distinguished from achievements by the control transitive suffix, we might expect other control/non-control distinctions to pattern in the same way, where the control form is an accomplishment and the non-control form an achievement. Another reason we might predict this is that all non-control forms are marginal in their use of imperfective morphology to indicate progressivity (Turner 2008) (4), a property commonly attributed to achievements (Comrie 1976, Smith 1997).

### *Situation type tests applied to reflexives*

Three of Kiyota's (2008) situation type tests are applied here to control and non-control reflexives, first to see if they are indeed telic predicates (rather than, e.g., activities), and then to determine if they are accomplishments or achievements. The three tests are as follows: interpretation with the perfect, interpretation with 'almost', and culmination entailment of perfectives. Of those reflexives tested successfully, all pattern with achievements, both control and non-control. Results of the last test are shown in (5).

### *Conclusions*

These preliminary findings suggest that agent control alone is not sufficient to distinguish an accomplishment from an achievement in SENĆOTEN, as even reflexives describing situations where the subject participant has full control pattern with achievements, not

accomplishments. I suggest that reflexives pattern with achievements because their subjects are co-referential with a patient, not just an agent (Gerds 1988, 2000).

- (1) a.  $k^w\text{f}$  **x<sup>w</sup>əčə-sət** tθə qeq  
PERF **wake-REFL** DET baby  
'The baby woke himself/herself up.' (Turner fieldwork)
- b. **mək<sup>w</sup>f-naNət** tθə speʔəθ  
**get.injured-N.REFL** DET bear  
'The bear injured itself accidentally.' (Turner fieldwork)
- (2) **x<sup>w</sup>əč-ət=sən** tə Jack ʔiʔ ʔawa k<sup>w</sup>=s x<sup>w</sup>əy-s  
**wake.up-C.TR=1SG.SBJ** DET Jack CONJ NEG COMP=NMLZ wake-3POSS  
'I woke up Jack but he did not wake up.' (Kiyota 2008: 265; gloss mine)
- (3) #ləʔə sən k<sup>w</sup>əʔ **le-nəx<sup>w</sup>** tsə lətem ʔiʔ ʔawa sən šəq-nax<sup>w</sup>  
there=1SG.SBJ=INF **get.fixed-N.TR** DET table CONJ NEG=1SG.SBJ finish-N.TR  
# 'I (managed to) fix the table, but I didn't finish it.' – Contradiction!  
(Kiyota 2008: 59; gloss mine)
- (4) ʔʔiʔ **pə~pət-nanət**  
ACCOMP IPFV~**hatch-N.REFL**  
'It's hatching.' (Turner 2008; gloss updated)
- (5) a. **\*pk<sup>w</sup>ə-sət=sən** ʔiʔ ʔəwə k<sup>w</sup>=nə=s ʔəne pək<sup>w</sup>  
**surface-REFL=1SG.SBJ** CONJ NEG COMP=1SG.POSS=NMLZ come surface  
Attempt at 'I surfaced but I didn't get to the surface.' (Turner fieldwork)
- b. **\*θiʔəN-naNət=sən** ʔiʔ ʔəwə k<sup>w</sup>=nə=s θə~θiʔəN  
**stand-N.REFL=1SG.SBJ** CONJ NEG COMP=1SG.POSS=NMLZ IPFV~stand  
Attempt at 'I managed to stand up but I am not standing.' (Turner fieldwork)

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## Japanese resultative phrases as verbal degree modifiers

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Wechsler's (2005) analysis of English resultatives, whose central feature is the notion of structural homomorphism, has clarified the meaning of this construction considerably. By identifying the scale structure of the result phrase and the event described by the sentence, this analysis correctly predicts that, at least in the canonical cases, English resultatives only allow result phrases with upper closed scales. Surprisingly, however, Japanese resultatives do not exhibit the same structural homomorphism. That is, although the existence of a result phrases in Japanese has the force of changing the described event from an atelic into a telic one, the scale associated with it does not have to be upper closed. For example, *nagaku* 'long' in (1) does not have an upper closed scale (as can be seen from the unacceptability of *#kanzen-ni nagai* 'completely long'), yet its appearance as a result phrase changes the described event from an atelic into a telic one, as can be seen from the fact that the resultative sentence (1) induces the 'imperfective paradox', as in (2).

- (1) John-ga gomu-o nagaku nobasi-ta.

John-NOM rubber-ACC long stretch-PAST

(lit.) 'John stretched the rubber long.'

'John stretched the rubber and made it long.'

- (2) John-ga gomu-o nagaku nobasi-tei-ta.  $\neq$  John-ga gomu-o nagaku nobasi-ta.

John-NOM rubber-ACC long stretch-ing-PAST John-NOM rubber-ACC long stretch-PAST

(lit.) 'John was stretching the rubber long.'  $\neq$  'John stretched the rubber long.'

Previous studies have not paid attention to, let alone provided an adequate analysis of, this apparent lack of homomorphism between the scale structure and the event structure in Japanese resultatives. It turns out, however, that, by employing the scale-based semantics of event structures recently developed by Kennedy and Levin (2008) (K&L) and treating result phrases as verbal degree modifiers, a straightforward analysis is available for this phenomenon.

Verbs appearing in the Japanese resultatives are basically change of state verbs (Kageyama 1996). Thus, we can analyze them as denoting measure of change functions, as in (3), along the lines of K&L. ( $\mathbf{m}_\Delta$  is a shorthand for a measure of change function derived from a measure function  $\mathbf{m}$  of type  $\langle e, d \rangle$ .  $\mathbf{m}^\uparrow_d$  is the same as  $\mathbf{m}$  except that the lower endpoint is redefined as the degree  $d$ . *init* and *fin* return the initial and the final temporal intervals of an event. For a reason that will become clear, we notate the dimension of measurement in the subscript of a measure function: e.g., by  $\mathbf{m}_{d[\delta=length]}$ , we know that the dimension of the scale underlying  $\mathbf{m}$  is that of length.)

- (3)  $\llbracket \text{nobas} \rrbracket = \text{stretched}_{\Delta[\delta=length]} = \lambda x \lambda e. \text{stretched}^\uparrow_{\text{stretched}(x)(\text{init}(e))}(x)(\text{fin}(e))$

In its positive form, (3) describes an atelic event, since, following K&L, we assume that the result of combining (3) with the verbal positive morpheme returns true just in case the **stretched**-degree of  $x$  as a result of event  $e$  is larger than the degree at  $e$ 's initial point, since the scale underlying **stretched** is an open scale (that is, (3) is atelic since the exact value of the endpoint is not specified).

Given this semantics of the verb, we can analyze Japanese result phrases as verbal degree modifiers. The roots shared by result phrases and positive form adjectives are analyzed as simple measure functions of type  $\langle e, d \rangle$  e.g., (4). Also, we posit the 'adverbializing' morpheme **adv** in (5), which returns verbal degree modifiers from measure functions. Combining (4) and (5), we obtain a verbal degree modifier in (6) which returns true just in case the degree that the measure of change function returns reaches the standard **long**-degree. This formulation correctly captures the telicity of the event described by the resultative VP in (7), as will be discussed in detail below.

- (4)  $\llbracket \text{naga} \rrbracket = \text{long}_{[\delta=length]}$

- (5)  $\text{adv} = \lambda g_1 \in D_{m[\delta=\mathcal{D}]} \lambda g_2 \in D_{m_\Delta[\delta=\mathcal{D}]} \lambda x \lambda e. g_2(x)(e) \geq \text{stnd}(g_1)$

- (6)  $\text{adv}(\llbracket \text{naga} \rrbracket) = \lambda g \in D_{m_\Delta[\delta=length]} \lambda x \lambda e. g(x)(e) \geq \text{stnd}(\text{long})$

- (7)  $\llbracket \text{nagaku nobas} \rrbracket = \text{adv}(\llbracket \text{naga} \rrbracket)(\llbracket \text{nobas} \rrbracket)$   
 $= \lambda x \lambda e. \text{stretched}^\uparrow_{\text{stretched}(x)(\text{init}(e))}(x)(\text{fin}(e)) \geq \text{stnd}(\text{long})$

Importantly, a verbal degree modifier can be combined only with particular verbs whose scale is COMPATIBLE with that of the modifier. What we mean by saying that two scales are compatible is that they are placed along the same dimension of measurement, although they may be different in the subpart relation with respect to each other. For example, the scales underlying **stretched**<sub>Δ</sub> and **long** are placed along the same dimension of measurement, that of length. However, these two scales are different in that the scale underlying **long** is a proper subpart of that underlying **stretched**<sub>Δ</sub>: the former is placed in a certain higher-degree subpart of the scale of the latter. We ensure this requirement for scale compatibility between a verb and a degree modifier by analyzing **adv** (5) as requiring as arguments a measure of change function and a measure function of the same dimension  $\mathcal{D}$ , where  $\mathcal{D}$  is a variable for an arbitrary dimension.

The one-way entailment pattern in (8), where the sentences are assumed to be asserted to describe the rubber's state as a result of someone's stretching it, supports this kind of compatible but asymmetric scale structures for **stretched**<sub>Δ</sub> and **long**. Only when the scale underlying *naga* 'long' is a proper subpart of that underlying *nobas* 'stretch', does this kind of pattern arise.

- (8) Kono gomu-wa nobas-are-teiru.  $\not\models \models$  Kono gomu-wa nagai. (in the above context)  
 this rubber-TOP stretch-PASS-PERF this rubber-TOP long  
 'This rubber has been stretched.'  $\not\models \models$  'This rubber is long'

As a result, the meaning of the VP in (7) is correctly predicted to be telic although the verb in its positive form would describe an atelic event. This is because (7) returns true just in case  $x$ 's **stretched**-degree as a result of participating in  $e$  reaches a certain point, namely, the standard of **long**-degree. Thus, our analysis correctly accounts for the seemingly mysterious behavior of Japanese resultatives.

Moreover, the current analysis correctly predicts that, if upper closed scale adjectives appear as result phrases, the result state of the patient must have a maximal degree of the property, since the standard degree of an upper closed predicate is its maximal degree (cf., e.g., Kennedy 2007). Thus, the proposed analysis automatically predicts that (9) is contradictory, to the desired effect.

- (9) #John-wa tsukue-o kireeni hui-ta-ga sono tsukue-wa kanzenni kireeni-wa  
 John-TOP desk-ACC clean wipe-PAST-but the desk-TOP completely clean-TOP  
 nara-nakat-ta.  
 become-NEG-PAST  
 'John wiped the table clean, but the table didn't become completely clean.'

The analysis outlined here is fully compatible with the observations made in the previous studies. Washio (1997) notes that result phrases in Japanese must denote a state which the event described by the verb has an intrinsic 'disposition' to change the patient into. This semantic restriction is properly accounted for in the current analysis as the requirement that the verb must have an underlying scale that has as its subpart the scale underlying the result phrase; Nakazawa (2008) argues that Japanese result phrases syntactically behave more like modifiers than verbal arguments. This observation, too, is compatible with the current analysis since we have analyzed result phrases as verbal degree modifiers.

In conclusion, the behavior of Japanese resultatives can be neatly captured by analyzing the result phrases as verbal degree modifiers: the proposed analysis demonstrates the effectiveness of K&L's scale-based semantics of event structures in the analysis of a new empirical problem, while at the same time suggesting a way to further elaborate it by introducing the notion of compatibility relations among scales.

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## Distinguishing the future: *arep* and *bakal* in Javanese

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Two future auxiliaries in East Javanese, *arep* and *bakal*, appear to be insensitive to aspect or modality. In this paper, I show that unlike other future expressions cross-linguistically, *arep* and *bakal* are not semantically distinguished via aspectual operators, such as for English (Copley 2002), Indonesian (Copley 2007), and Blackfoot (Reis Silva, to appear). Nor are *arep* and *bakal* distinguished by their potential ability to occur with different conversational backgrounds – both these future expressions are unacceptable in epistemic or deontic contexts. Instead of aspect or modality, other components of the grammar seem to distinguish *arep* from *bakal* in this Austronesian language: specifically, selectional requirements and an agentive interpretation of the subject with *arep*. I propose that while both *bakal* and *arep* are raising predicates, the particular characteristics of *arep* arise from its structural ambiguity: with animate subjects, *arep* is a control predicate.

First, progressive-like or generic-like aspectual operators do not appear to classify *arep* from *bakal*, suggesting that these future auxiliaries are bare (aspectless) future modals. Testing for progressive-like aspect, Copley (2002) shows that while English *will* is felicitous in an offering context (e.g. *(If you want) I will bake*), but not *be going to* (e.g. *\*(If you want) I am going to bake*). Copley attributes this difference to aspect: progressive-like futures are not acceptable in offering contexts. In Javanese, however, both *arep* and *bakal* are felicitous in these kinds of offering contexts, whether or not the antecedent is overt, suggesting that they are not progressive-like. As for generic-like aspect, both *arep* and *bakal* are not offered in translations for a generic or dispositional context, nor are they accepted in such contexts. This behaviour suggests that these auxiliaries are not generic-like nor progressive-like, but aspectless futures. That *arep* and *bakal* can co-occur with a wide variety of TAM auxiliaries supports this view.

Instead of differing with respect to aspect or modality, *arep* and *bakal* differ in their selectional requirements. Specifically, *arep* is more restricted in its possible environments, and can only occur with events, while *bakal* can occur with states and events. For example, *bakal*, but not *arep*, can take stative VPs such as *ngerti* ‘to know’, *eling* ‘to remember’. Similarly, *bakal*, but not *arep*, is acceptable with adjectives such as *seneng* ‘happy’, *dhuwor* ‘tall’; there is no distinction between stage-level or individual-level predicates. Thus, *bakal* can freely take event and stative predicates as complements, while *arep* is more restrictive: it can only take eventive predicates.

*Arep* and *bakal* also differ in how they affect the interpretation of animate subjects in event predicates. That is, given the same environment, as in (1)a-b, the subject with *arep* has an agentive reading as shown by the consultant’s comments, while with *bakal*, the subject is not agentive, and the sentence is interpreted as a general future prediction.

- (1) You go to a *dukun* (fortune teller) to hear about your future. After calculating your birth date and name, she tells you...
- a. Wong sing jenenge Supardi kuwi **arep** ndamelaken omah kanggo sliramu  
person that name Supardi the *arep* construct house for 2SG  
‘A man named Supardi will build a house for you.’  
→ “*Supardi already planned this, has a desire to do this, even before you came to the dukun (fortune teller)*”
  - b. Wong sing jenenge Supardi kuwi **bakal** ndamelaken omah kanggo sliramu  
→ “*No plans*”

However, the agentive reading of the subject with *arep* is not forced with inanimate subjects, as this auxiliary allows such subjects as in “**The tree** *arep* fall because of the wind” in Javanese. The future auxiliary *arep* appears to have a dual nature: it assigns an agentive reading to animate subjects, but allows inanimate subjects without construing an agentive reading.

This dual nature may be explained via different syntactic structures. If the future auxiliaries *arep* and *bakal* are both raising predicates (both cannot passivize or take verbal morphology), one would predict that there is no thematic relationship between these future auxiliaries and the subject, and therefore no thematic restrictions are imposed on the subject. This is the case for *bakal*. However, *arep* is different: with animate subjects, *arep* establishes an agentive thematic relation with the subject, as shown in (1)a. The agentivity reading with *arep* is restricted to animate subjects, suggesting that a control structure, which assigns a thematic role to the surface subject, best captures this restriction for *arep*. Thus, *arep* appears to be structurally ambiguous: it must be a control predicate with animate subjects, and a raising predicate otherwise.

This proposal has interesting consequences for inanimate subjects with regards to the interaction of *arep* with causative morphology. With *arep* plus the causative suffix *-no*, either *arep* is not accepted, or the inanimate subject is construed to be animate, as shown in (2). The causative morphology thus appears to force the control structure of *arep*, and disallow the raising option.

- (2) ??/# angin kuwi **arep** nibo’no wit kuwi  
           wind the   *arep* fall-CAUS tree the  
           ‘The wind will cause the tree to fall.’  
           → “...it must be that the wind is you; it must be living, a person”

Finally, the different selectional requirements of *arep* appear to override the agentivity reading with animate subjects. Given a context where the subject actively wants the state to be true, it is still not acceptable to use *arep*; instead, a different modal, *mesthi*, is most appropriate.

- (3) Context: You are going on a hunger strike for the freedom of Tibet.  
       aku \***arep** / **mesthi**       ngeleh  
       1sg *arep* / inevitable hungry  
       ‘I will be hungry.’

In sum, I show that Javanese future auxiliaries *arep* and *bakal* are distinguished not by aspect or modality, but via selectional restrictions and an agentivity reading with animate subjects with *arep*. It is therefore important to investigate understudied languages such as Javanese to explore the diversity of future expressions and to identify what parameters allow for variation in the interpretation of future expressions cross-linguistically.

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## Past Time Reference in Saamáka

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Saamáka has two ways to convey a past interpretation; a preverbal morpheme *bi*, as in (1), and an unmarked non-stative verb, as in (2).

- (1) DÍ wómi bi wáka a mátu déndu.  
*DET man PST walk LOC forest inside*  
a. ‘The man walked in the forest’.  
b. or ‘The man had walked in the forest’.
- (2) DÍ wómi wáka a mátu déndu.  
*DET man walk LOC forest inside*  
‘The man has walked in the forest’.

The morpheme *bi* has the following characteristics. It is discourse sensitive, but insensitive to aktionsart. An event embedded under *bi* is no longer relevant at time of utterance (TU). A plausible hypothesis might be that *bi* is a tense operator that introduces a precede relation between the topic time (TT, in the sense of Klein 1994) and TU, i.e. a PAST operator. A problem for this preliminary hypothesis is that *bi* does not have the structural distribution of what is expected from a PAST tense operator. The morpheme is optional for non-stative verbs, since unmarked non-stative verbs also convey a past orientation of an event, as in (2). Furthermore, the interpretation of *bi* does not always imply past, it is ambiguous between a simple past and a past perfect, as in (1). An analysis of *bi* should be able to account for this. I assume that T expresses a relation between TT and an anchor point, i.e. between AspP and FinP. In the default case, this anchor point is TU. I present evidence that the default tense in Saamáka is interpreted as any time overlapping with this anchor point. Thus, the T operator that occurs in Saamáka is actually PRESENT. As a result, when *bi* does not occur, this overlap relates TT to TU, i.e.  $TT \cap TU$ . It expresses PRESENT. When *bi* occurs, the anchor point is shifted back to some contextual relevant moment prior to TU, i.e. anchor point  $< TU$ . This results in a past reading. I argue that *bi* is an anchor point shifter which is located in FinP in the underlying structure (in the sense of Eng 1987). Furthermore, the tense operator that occurs in Saamáka is actually PRESENT and it establishes an overlap relation between TT and the anchor point/TU. I claim that the perspective of an event, in the default interpretation, is present.

An unmarked non-stative verb also conveys a past reading, to be more precise it expresses a result state. It is sensitive to Aktionsart; non-stative verbs express a past time reference and stative verbs a present time reference. Moreover, an event expressed by an unmarked non-stative verb is still relevant at TU. From this follows that an unmarked non-stative verb expresses a perfect reading (in the sense of Smith 1997). I assume that Asp chooses a time point within an event. Asp involves the relation between time of situation (TSit) and TT, i.e. between vP and AspP. I argue in this paper that the perfect reading is not an inherent feature of an unmarked non-stative verb, but that Saamáka has a null PERF. Reasons for assuming this involve the temporal orientation of an event. If a perfect reading were inherent, we would expect that an event always would have a past orientation. When an unmarked non-stative verb is embedded under for example imperfective *ta*, possibility modal *sa*, or complementizer *fu*, the event expressed receives a present or future orientation, as in (3-a). A past orientation is judged ungrammatical and can only be triggered when the morpheme *bi* is present, as in (3-b).

- (3) a. A ta kondá wán óto dá sísa.  
           3SG IMP tell ART story give sister  
           ‘S/he is telling a story to her/his sister’.  
           or \*‘S/he was telling a story to his sister’.
- b. A bi ta kondá wán óto dá sísa.  
           3SG PST IMP tell ART story give sister  
           ‘S/he was telling a story to her/his sister’.

Furthermore, I assume that non-stative verbs in Saamáka are incompatible with simple PRESENT, as in English, a fact that should be derivable from the idea that they do not express internally homogenous situations. I do not give an analysis of this restriction here, but simply assume that in Saamáka, as in English, events have to be converted to some derived state in order to combine successfully with the (null) PRESENT. In the absence of the progressive marker in this position (*ta* in (3-a)), a null PERF is triggered with dynamic verbs in this environment.

The null perfect story can also account for the illusion of the ambiguous interpretation of the morpheme *bi*. I claim that the default interpretation of *bi* is shifting the anchor point to some contextual relevant moment before TU. When the morpheme is interpreted as a past perfect, null PERF is available in the underlying structure. Thus, the combination of *bi* and null PERF in the structure triggers a past perfect reading, as in (1-b). Null PERF does not occur when *bi* is interpreted as a simple past marker, as in (1-a).

This paper shows that the idea of building up past time reference can be done in different ways which do not necessarily involve an actual precedes relation in T, i.e. does not require a PAST tense operator. In Saamáka this is done by shifting the anchor point or via aspect. The former is expressed by the morpheme *bi* which shifts the anchor point to some point prior to TU, i.e. anchor point < TU. The latter is expressed via null PERF, i.e. an unmarked non-stative verb form. In this case, a result state is created of which TSit is located before TT which in the default case overlaps with TU, i.e. TSit < TT  $\bigcirc$  TU.

Morpheme order in creoles has often been used to make claims about the universal unmarked order of functional elements in natural language. I show in this paper that a detailed examination of the morphosyntactic devices in a language, together with a careful look at their role in the compositional semantics of the proposition can yield surprising results. Thus, one cannot use the ordering of *bi* > *sa* > *ta* in Saamáka to argue that the order of elements is Tense > Mood > Aspect. Such an ordering would violate any functional hierarchy that places epistemic modality above tense, as in Cinque’s (1999) proposal. In fact, under my analysis, *bi* is not a tense operator but an operator in Fin, and the order of morphemes in Saamáka supports the Fin > T > Asp partial order as well as the Fin > Modality > Asp partial order, but gives us no direct morphological evidence concerning the ordering of T and Modality.

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## Analyse aspectuelle des constructions inchoatives françaises *se mettre à* et *commencer à*

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Les constructions inchoatives *se mettre à* et *commencer à*, loin d'être synonymiques, présentent des différences d'emploi significatives (cf. Lamiroy 1987; Franckel 1989; Peeters 1993). Dans cette contribution, nous approfondirons les divergences aspectuelles entre les deux constructions. L'analyse syntactico-sémantique, basée sur corpus, utilise des données provenant de *Frantext* (corpus de textes littéraires), *Le Soir* (textes journalistiques) et *Corpaix* (données orales transcrites). Elle consistera en trois parties : la relation entre les deux constructions inchoatives sera commentée en rapport avec les types de procès, la complémentation adverbiale et les temps utilisés.

En premier lieu, nous examinerons la relation plutôt problématique des deux constructions avec les types de procès, en particulier avec les états et les achèvements. Généralement parlant, *se mettre à* se distingue de *commencer à* par le fait qu'il ne se combine qu'avec les procès en excluant les états (Lamiroy 1987). Une analyse sur corpus montre toutefois que *se mettre à* s'accorde avec tout type de procès, même si, comme nous pouvons l'observer ci-dessous, certains problèmes subsistent.

- (1) Mais ma lettre à Colomb ne fera que blanchir tous les gens à argent ; quand ils sont arrivés au bien-être, ils **se mettent à** haïr les gens qui ont été lus du public. (Frantext)
- (2) Mais ma lettre à Colomb ne fera que blanchir tous les gens à argent ; quand ils sont arrivés au bien-être, ils **commencent à** haïr les gens qui ont été lus du public.
- (3) \*Jean **se met à** être capitaine. (Peeters 1993)
- (4) Jean **commence à** être capitaine.

Si *se mettre à* et *commencer à* s'accordent parfaitement avec les états dans (1), (2) et (4), une contrainte stative apparaît toutefois dans (3). Nous étudierons pourquoi cela fonctionne différemment et pourquoi une analyse plus précise s'impose.

Ensuite, nous vérifierons dans quelle mesure *se mettre à* et *commencer à* se distinguent sur le plan de leur complémentation adverbiale. En général, *se mettre à* s'associe à des adverbes exprimant la vélocité ou la brièveté (*p.ex. soudain, tout à coup, brusquement*) et il est décrit comme marqueur d'une inchoation plus « abrupte » (Coseriu 1976) que *commencer à*.

- (5) Aussitôt les Invisibles se mirent à enlever les tapis et les flambeaux qui entouraient le cercueil. (Frantext)
- (6) *Tout à coup*, tu te mis à chanter. Que pouvais-je faire, misérable ? Ton chant était plus charmant encore que ta danse. (Frantext)

Nous examinerons si l'on peut considérer cet élément comme une caractéristique systématique de *se mettre à* et, le cas échéant, ce que cela pourrait nous apprendre sur son comportement aspectuel.

Enfin, nous analyserons les éventuelles restrictions par rapport à l'emploi de certains temps. Franckel (1989) remarque que *se mettre à* adopte un comportement plus contraint que *commencer à* dans l'emploi assertif de l'indicatif présent, plus précisément lorsque il s'agit de verbes d'état. , Notre corpus montre cependant d'une part que *se mettre à* se combine avec tous les temps et tous les modes et, d'autre part, qu'il privilégie le passé simple dans un corpus littéraire et le passé composé dans un contexte journalistique.

Les divergences observées entre les deux constructions seront expliquées en termes de champs aspectuel et d'un degré de marquage différent.

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## **Semantic typology of epistemic and inferential expressions**

From a typological perspective, linguistic categorization of epistemic and inferential concepts is quite variable. Although each language has its own modal categories, typology is possible on the basis of comparative concepts. This paper considers both the formal and the semantic diversity of epistemic and inferential grammatical expressions, but it focuses on the semantic distinctions. I will discuss the relationship between the suggested comparative concepts and the language-specific semantic distinctions in my large-scale typological study (130 languages), based on the survey of descriptive grammars and other descriptive material. I will argue that the levels of abstraction selected for the various comparative concepts are the most appropriate ones, taking into account the purpose of the study. I will also show how the concepts constructed and the semantic diversity described in the study could be used in further study, using other kinds of data sources, like corpora and elicitation.

The importance of the notion of *tertium comparationis* or comparative concept as an independent standard for crosslinguistic comparison has often been discussed in the typological literature (e.g. Haspelmath 2003, 2008, Lazard 2005). The comparative concepts, as understood in this paper, can take various forms. They are created by linguists for the specific purposes of comparison, and they are not psychologically real. For example, Palmer (2001) and Aikhenvald (2004) have constructed several useful coarse-grained comparative concepts pertaining to the semantic domains of epistemic modality and evidentiality, including inferentiality. In this paper, most of the comparative concepts aim at capturing more fine-grained semantic distinctions. The point of departure is the notion of function that is defined by Haspelmath (2003) as neutral between language-specific notions of sense and use (or meaning). According to Haspelmath, a function is distinguished if there is at least one language that has a formal expression for that function. I suggest that epistemic functions are based on the values of the semantic parameter ‘the degree of the speaker’s certainty’, and inferential functions need at least a value of the parameter ‘the source of the information’ for their characterization. Often, however, inferential functions combine values from both of the parameters. Either the first or the second value can be interpreted as predominant. Many of the forms studied are multifunctional. For example, the English *must* can indicate both ‘certainty’ (predominant) and ‘inference from results’ among its several functions.

Although the notion of function proposed by Haspelmath (2003) is certainly useful as a comparative concept in many kinds of typological studies, I will argue, by means of several examples, that a strict interpretation of this notion is not reasonable in the present fine-grained semantic study, based on descriptive material. The basic problem is that the available data is quite heterogeneous. Some of the descriptions give detailed information of the various semantic nuances of epistemic and inferential forms, while most of the descriptions are not explicit enough. For example, Gordon (1986) states that Maricopa distinguishes three grammatical constructions to indicate that the speaker infers that some event has occurred in the past. The distinctions are based on the type of present evidence as a basis for inference. However, the basis for inference of this type is not always characterized in detail. Therefore, the coarse enough function ‘inference from results’ is proposed as a comparative concept. Although it is not reasonable to create functions that indicate presumably rare semantic nuances, the collection of the functions is greater than in the previous studies concerning epistemic modality and evidentiality.

All the 33 functions and the 6 subdomains that they represent will be presented on the semantic map, constructed by means of a multidimensional scaling (MDS) computer program PERMAP. The interpretation of the map is compared to the theory of conceptual spaces presented by Gärdenfors (2000). Although the comparative concepts are not claimed to be

psychologically real, it is possible to derive hypotheses concerning the conceptual organization of language-specific grammatical forms that fall under the comparative concepts. The underlying assumption is that the conceptual/psychological space modeled by MDS corresponds to Euclidean space. This assumption can be challenged, and some proposed solutions to handle the problems with this assumption will be briefly considered.

The proposed comparative concepts have both semantic and formal definitions. From the formal point of view, they cover various kinds of grammatical expressions. It is not obvious that they could also be used for lexical expressions of epistemic and inferential meanings. A continuum between grammatical and lexical elements is now widely accepted in cognitive, functional(-typological), and grammaticalization-based approaches. The polar types of meanings can, however, be characterized by several properties. For example, it has been claimed that grammatical meaning is considerably less accessible to speakers than lexical meaning (e.g. Bybee 2003). However, some recent studies show that there are individual differences in metalinguistic awareness of the forms and use of language which are due to the factors like education, bi- and multilingualism, exposure to written texts, and explicit instruction in languages (e.g. Dąbrowska and Street 2006, Jessner 2008). Some descriptions in reference material used in this study seem to support these views. The implications of these findings for the description of grammatical versus lexical modal meanings is discussed in the paper.

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## Les stades avancés de l'acquisition de l'anglais L2 par des apprenants francophones: le cas du bornage aspectuel

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Notre étude porte sur la construction et le rôle de l'interface aspect grammatical / *Aktionsart* dans un corpus de narrations orales produites à partir du livre en images *Frog, where are you?* par des apprenants francophones avancés et très avancés d'anglais. La recherche en acquisition des langues propose deux grandes hypothèses pour rendre compte de l'émergence de la morphologie aspectuelle chez les apprenants d'une langue seconde. Selon l'hypothèse de l'aspect – *the aspect hypothesis*- (Andersen 1991, 1993 ; Andersen & Shirai, 1994 ; Robinson, 1995), il existe une forte corrélation entre le choix d'une forme verbale et la sémantique du prédicat, surtout dans les stades basiques de l'acquisition. Les apprenants associent les inflexions perfectives avec des prédicats téliques et/ou ponctuels et les inflexions imperfectives principalement avec des prédicats d'activité ou d'état (atéliques). La production des locuteurs natifs présente une distribution similaire de la morphologie aspectuelle, mais, selon Andersen & Shirai (1994), les locuteurs natifs sont plus flexibles quant à l'interface aspect grammatical / *Aktionsart* et peuvent, dans certains contextes, utiliser les formes aspectuelles de manière marquée (par exemple, une inflexion perfective avec un prédicat atélic). Selon la deuxième hypothèse, celle du discours – *the discourse hypothesis* - la distribution de la morphologie verbale en interlangue est également conditionnée par la nature de la tâche communicative, c'est à dire par le type de discours que l'apprenant doit produire (Bardovi-Harling 1998, 2000). Dans le cas de la narration, les inflexions aspectuelles sont étroitement liées à la distinction entre le fil narratif et l'arrière-plan de l'histoire. Par conséquent, les apprenants associent en général les inflexions perfectives avec les prédicats qui font avancer l'histoire et utilisent les inflexions imperfectives surtout avec des prédicats qui constituent l'arrière-plan de l'histoire.

Nous nous proposons d'étudier la validité de ces deux hypothèses dans les variétés avancées de l'anglais L2. Les différences mais aussi les similarités qui existent entre l'expression de l'aspect grammatical en anglais et en français représentent l'intérêt de ce binôme linguistique. En nous appuyant sur une analyse quantitative et qualitative de notre corpus, nous désirons montrer que les apprenants francophones avancés se guident de manière prioritaire par l'hypothèse de l'aspect pour ce qui fait l'utilisation de la morphologie aspectuelle en anglais L2, et c'est seulement avec les apprenants francophones très avancés (quasi natifs) que l'hypothèse du discours prend le devant et permet de (dé)construire l'interface aspect grammatical / *Aktionsart* en adéquation avec la tâche narrative. De plus, nos données en anglais L1 indiquent que, dans les narrations sur images, les locuteurs natifs distinguent entre le bornage à droite (*boundedness*) et le caractère télique des événements et c'est par le bornage à droite que certains prédicats atéliques peuvent intégrer le fil narratif. Nous allons montrer que la distinction entre bornage et télicité se met en place de manière stable seulement chez les apprenants très avancés et pourrait constituer un critère pour distinguer entre les stades finales de l'acquisition de l'anglais.

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## LE PASSE IMMEDIAT EN KHMER CONTEMPORAIN

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En français, la notion de passé immédiat est associée soit à des adverbes ou circonstants comme *à l'instant*, soit à des marqueurs qui, en tant que tels, n'ont pas de dimension temporelle : *venir : je viens d'arriver /seulement : j'arrive seulement /(tout) juste : j'arrive (tout) juste* et qui peuvent se combiner : *je viens tout juste d'arriver / etc.* On observe une situation comparable en allemand avec *gerade* (Schaden, Toven, 2008) ou encore en anglais avec *just* (De Paoli, 1980).

En khmer, la situation est comparable : la notion de passé immédiat est associée soit à des adverbes, soit au marqueur ***t3:p***, mais à la différence du français, en khmer les deux types de marqueurs peuvent se combiner

(1) Paul à Jean : Ton père est rentré de Lyon ?

ba:t koat ***t3:p*** mɔ:kdaɪ msɔlmɛɲ

oui il ***t3:p*** arriver hier

« Oui, il ***vient d'arriver*** (hier) »

Ce marqueur peut se combiner avec d'autres unités : ***n3ŋ*** utilisé par ailleurs pour exprimer un procès à venir et ***tæ*** qui est un marqueur de restriction comparable à 'seulement'. Enfin, une même séquence peut associer ces trois unités (ex. (4)) :

(2) Paul à Jean : On va déjeuner ensemble ?

ʔat te khnom ***t3:p n3ŋ*** nam haɜj

nég. part. je ***t3:p n3ŋ*** manger part.

« Non, je ***viens de*** manger à l' instant »

(3) Paul à Jean : Pourquoi es-tu si content ?

mɔn saba:ɟɔt meɕ baɜ ***t3:p tæ*** baɜk prakkhæ

nég. être content quoi si ***t3:p tæ*** ouvrir salaire

« Bien sûr que je suis content, je ***viens juste de*** toucher mon salaire »

(4) S1 est sur le point de partir à l'aéroport (il est pressé).

thmaɜ n3ŋ haɜj ʔaɛɲ ***t3:p tæ n3ŋ*** ɕɛɲ tɜi coɦ

temps déict. part. tu ***t3:p tæ n3ŋ*** partir aller descendre

thmaɜ na ba:n ʔaɛɲ tɜi dal

temps inter. obtenir tu aller atteindre

« T'as vu l'heure qu'il est ? ***C'est seulement maintenant que*** tu pars ! Je me demande à quelle heure tu vas bien pouvoir arriver. »

(les traductions en français devront être justifiées et ne sont pas des équivalents stricts)

Dans cette communication, nous proposons une description systématique de ces quatre types de construction.

Notre analyse portera sur les points suivants :

1. caractérisation de ***t3:p*** comme mettant en relation un événement **p** pourvu de ses propres coordonnées dans le temps avec un intervalle temporel *i* associé à un repère temporel. Il s'agit en général de *To* moment de l'énonciation mais dans certains cas (récits, contes) il s'agit d'un repère temporel *Ti* construit dans le contexte gauche.
2. L'intervalle *i-To* est associé à un premier événement **q** présent dans le contexte gauche qui a à avoir avec l'événement **p** sur lequel porte ***t3:p***. Cette mise en relation n'est pas seulement temporelle : elle concerne le rapport à des degrés divers entre les deux événements. Ce rapport n'est pas le même selon que l'on a ***t3:p***, ***t3:p n3ŋ***, ***t3:p taε*** ou ***t3:p taε n3ŋ***.
3. Ce rapport en *i – To* entre les événements **p** et **q** signifie souvent la confrontation de deux points de vue concernant ce qui est actualisé en *i - To*.

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