

Cross-linguistic Variation in Event Realization

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‘This report is a record of issues in the semantics of natural languages that have concerned me in the past few years, some of the things I have had to say about them, and some of the things others have had to say about them. There is nothing new in these pages, and there is much that is borrowed. I use numbered paragraphs mostly to create favorable associations– but also to make it obvious that I do not expect the reader to perceive any structure beyond that of sheer sequence.’ (Charles Fillmore 1970).

- The point of talking is to describe how the world is, what people are doing, and to say how things are changing or not
- Wee know since Vendler (1957), Verkuyl (1972), Dowty (1979) and others that whether we describe a change that occurred or not and what kind of change occurred depends on (1) the meaning of verbs, (2) properties of the verb’s arguments, (3) aspect markers (or aspect-sensitive tenses, de Swart 1998)
- *Culmination* plays a particular important role in our descriptions of events, as it means the difference between stopping and finishing
- Sometimes you do everything right for culmination to occur, but culmination does not occur!
- The proto-patient in (2) is a numerically bounded entity and the predicate “should” be telic (Kennedy 2012); the verb in (3) describes a bounded change of state and the proto-patient is an individual. And in (4) we added a perfective marker for good measure (and, if you wanted we could even added a perfect marker to the perfective marker!).

- (1) TAM_∇ (SIT-TYPE_∇ (arg_{1∇} . . . arg_{n∇}))
- (2) wo (...) chi le liang chuan dakao, dan mei chi-wan^{Google}
I (...) eat PERF two CL kabob, but not eat-finish
‘I ate two kabobs, but didn’t finish eating. (lit.)’
- (3) Xu Mei he Sun Mazi ba Lao Lo sha le mei sha-si^{Google}
Xu Mei and Sun Mazi BA Lao Lo kill le not kill-die
‘Xu Mei and Sun Mazi killed Lao Lo but didn’t make him die. (lit.)’
- (4) a. Surii tɛɛŋ klɔɔn sɔɔŋ bət k^hũm tɛɛ jaŋ māj sɛd
Surii compose poem two CL ascend but still not finish
‘Surii composed two poems, but has not finished it yet.’
b. Surii tɛɛŋ klɔɔn bət ní k^hũm tɛɛ jaŋ māj sɛd
Surii compose poem CL this ascend but still not finish
‘Surii composed this poem, but has not finished it yet.’

c. Surii tɛɛŋ man k^hûm tɛɛ jaŋ mâj sèd
 Surii compose it ascend but still not finish
 ‘Surii composed it, but has not finished it yet.’

- That sometimes things seem to go wrong has been observed for many languages and many predicates (see Demirdache and Martin 2014 for a summary)
- ... but not all languages go as far as languages such as Mandarin and Thai and there can be variation among speakers

(5) Mary ate three sandwiches, ??/*but only finished two (Filip 2008).

- The semantics for words that mean what English *kill* or *eat* mean and fairly standard rules for composing meanings would predict (2) and (3) are infelicitous
- Kennedy’s (2012) model of incremental change (see (6)) predicts that as long as (strictly) incremental theme verbs have numerically quantized proto-patient the predication should always be telic (and, thus, entail culmination). The same is true of Filip’s (2008) analysis.

(6) \llbracket [VP chi le liang chuan dakao] $\rrbracket = \lambda e. \exists x[\text{eat}'(e) \wedge \text{kabobs}'(x) \wedge \text{NU}_{\Delta}(\text{kabobs}')(x)(e) = 2$

1 The “facts”

1.1 The effect does not depend on *surface* boundedness of the proto-patient

(7) us=ne do murgiyaa pakaayii par vo taiihaar nahii hai
 Pron.3.Sg=ERG two chicken cook but Pron.3.Pl ready NEG be
 ‘He cooked two chickens but they are not ready yet.’

(8) Surii tɛɛŋ klɔŋ bət ní k^hûm tɛɛjaŋ mâj sèd
 Surii compose poem CL this SEMI-PERFV but still not finish
 ‘Surii composed this poem, but has not finished it yet.’

(9) Tuoersitai-de Zhanzheng yu Heping wo bu xihuan, du le ji ci dou mei
 Tolstoy’s War and Peace I not like, read PERF several time all not
 du-wan^{Google}
 read.finish

‘I don’t like Tolstoy’s War and Peace, I read it several times, but never finished reading it.’

1.2 The proto-patient must have been affected

(10) #Jintian zaoshang chi le yi ge hanbao, buguo wo liean yi kou ye mei chi
 Today morning eat PERF one CL hamburger, but I even one bit also not eat
 ‘I ate a hamburger this morning, but I didn’t even have one bite.’

(11) #Ta sha le Lisi, danshi Lisi mei shou bandian shang
 He kill PERF Lisi, but Lisi not receive little.bit injury
 ‘He killed Lisi, but Lisi was not even hurt a little bit.’

- Demirdache and Martin (2014) point out that in some cases the proto-patient need not be affected (12)
- The effect may be due to the fact that some objects are fire-proof or require intense heat before reaching the kindling point (see (13))
- So, the absence of affectedness might be very specific to the meaning of *shao* ‘burn’ in Mandarin and there is no quasi-requirement for agent control (hereafter, AC) for NC to hold for this verb (see (14))

(12) Yuehan shao le ta-de shu, dan mei shao-zhao
 Yuehan burn PERF 3SG-DE book but NEG burn-touch
 ‘Yuehan burned his book, but it didn’t get burnt at all.’

(13) Wo shao le tie, danshi tie mei shao-zhao
 I burn ATTRIB iron, but iron not burn-on
 ‘I burned the iron, but it was not on fire.’

(14) Huo shao le zhuanman shui de zhibei, dan mei shao-zhao
 fire burn PERF fill water DE paper cup, but not burn-on
 ‘The fire burned the paper cup that was filled with water, but it was not on fire.’

1.3 The proto-agent must be in control

- Dermidache, Martin, and Schäfer note that the proto-agent has to be in control for non-culmination (hereafter, NC) to arise in many (all?) languages *most of the time*

(15) Pierre l’a provoquée, mais elle n’a pas été touchée du tout
 Pierre her-has provoked, but she NEG-has NEG been touched of all

(16) La remarque l’a provoquée, #mais elle n’a pas été touchée du tout
 The remark her-has provoked, but she NEG-has NEG been touched at all

1.4 Only some of the verbs lead to an incompleteness effect

- There is a cline among languages that exhibit an incompleteness effect. Some exhibit it only for *some* incremental theme verbs (and not necessarily for all quantized direct objects) (English); some exhibit it for incremental change verbs (Hindi); some for all induced scalar change verbs (Mandarin, Thai; Salish (?))

(17) *jiǎn* ‘to cut with scissors’, *xiū* ‘to repair’, *quàn* ‘to persuade’, *shā* ‘to kill’, *guān* ‘to close’, *niàn* ‘to read’, *chī* ‘to eat’ *hōng* ‘to dry (clothes)’, *xǐ* ‘to wash’, *zhǔ* ‘to cook’, *dú* ‘read’, *xiě* ‘write’, *bèi* ‘to recite (memorize)’, *chàng* ‘to sing’, *xiàzài* ‘to download’, *jiāo* ‘to teach’, *gài* ‘to build’, *zhì* ‘to cure’, *guān* ‘to close’, *zhuā* ‘to catch’, *diǎn* ‘to light up’, ...

- Only stems that denote “gradable” changes can lead to NC: Verbs that denote simple changes cannot (Beavers 2006)

Group I	Group C
<i>jiǎn</i> ‘to cut’, <i>xiū</i> ‘to repair’, <i>quàn</i> ‘to persuade’, <i>shā</i> ‘to kill’, <i>guān</i> ‘to close’, <i>niàn</i> ‘to read’, <i>chī</i> ‘to eat’ <i>hōng</i> ‘to dry (clothes)’, <i>xǐ</i> ‘to wash’, <i>zhǔ</i> ‘to cook’	<i>zhuǎn</i> ‘to turn’, <i>zhà</i> ‘to deep fry’, <i>yān</i> ‘to pickle’, <i>kǎo</i> ‘to bake’, <i>fù</i> ‘to pay’, <i>jìn</i> ‘to soak/immerse in liquid’

Table 1: Some incomplete and complete stems in Mandarin

Group I	Group C
<i>ʔàan</i> ‘read’, <i>khâa</i> ‘kill’, <i>kin</i> ‘eat’, <i>khǎan</i> ‘write’, <i>tàd</i> ‘cut’, <i>pəəd</i> ‘open’, <i>sôm</i> ‘repair’	<i>càaj</i> ‘pay’, <i>câaɲ</i> ‘hire’, <i>cèɛk</i> ‘distribute’, <i>lûaktâɲ</i> ‘vote’

Table 2: Some incomplete and complete stems in Thai

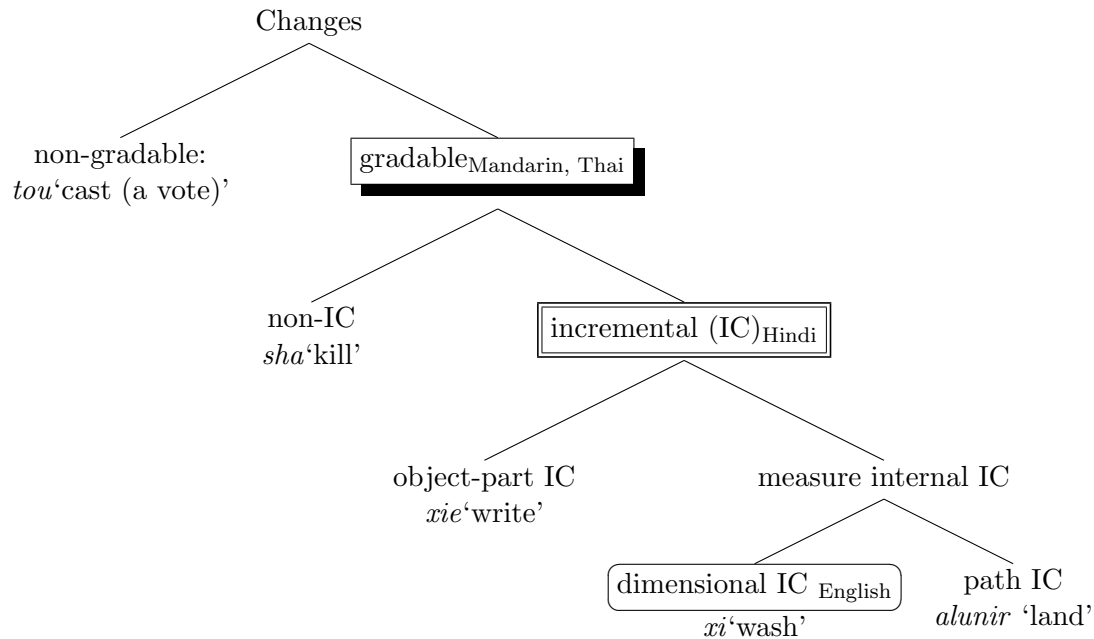


Figure 1: A classification of (dyadic) state-change stems

1.5 Perfect-ivity does not cancel NC

- Koenig and Muansuwan show that (semi-)perfective markers like *k^hûn* (lit. ascend) or perfect markers like *maa* (lit. ‘come’) do not cancel NC (i.e., entail culmination)
- There might be a strong implicature that the book was completed (and even more so if both *k^hûn* and *maa* are used), but it is not an entailment
- The meaning of the (semi-)perfective and perfect markers are what you would expect: The action of writing must have stopped and there must be some “result” at reference time of the action of writing
- (19) requires some result to still hold at reference time (e.g., it is felicitous if the portion of the poem which was written on the board has been erased before speech time)

(18) t^həətɛɛŋ nəŋsũũmaa tɛkəkəəd pùaj cuŋ mâj tɛɛŋ tò
she write book come but happen sick therefore NOT write continue
‘She has written a book, but she got sick, so she did not continue.’

(19) c^hǎn k^hien klɔn p^haǎsǎa faràŋsèd bon kràdaan maa
I write poem language French on blackboard come
‘I have written a poem in French on the blackboard.’

1.6 Serial verb constructions may or may not cancel NC

- There are differences between Mandarin and Thai in whether serial verb constructions cancel the incompleteness effect
- Even in Thai AC seems to still hold for SVC structures that include a boundary marker

(20) Zhichuan piao guo le he, #danshi mei piao guo
Paper-boat float cross PERF river, *but not float cross
‘The paper floated across the river, but did not cross it’

(21) Ta zou jin le shangdian, #danshi mei jin shangdian
he walk enter PERF shop, #but not enter shop
‘He walked into the shop, but didn’t enter the shop.’

(22) #Rua kradaad lɔy k^hâam mɛɛ-náam tɛɛ mâj k^haam
Boat paper float cross river but NEG cross
(Intended meaning: The boat paper floated across the river but didn’t get across.)

(23) Piti dɛen paj talàad tɛɛ paj mâj thũng prò? fɔn tòk
Piti walk go market but go NEG reach because rain fall
‘Piti walked to the market but didn’t reach because of the rain.’

- The use of resultative VV compounds in Mandarin seems to be the flip side of the ubiquity of the incompleteness effect: Resultative VV compounds strengthen the implicature into an entailment (Wang 2014)
- Does the fact that the Thai SVC combines VPs rather than Vs explain the fact that the incompleteness effect is maintained?

1.7 Implicatures and coercion may play a role

- The implicature that the event is complete may be very strong (see (24))
 - Some of the claimed differences between languages might be a matter of implicatures (see (25))
- (24) c^hǎn k^hi'en klɔŋ p^haǎsǎa faràŋsèed bon kràdaan maa
I write poem language French on blackboard come
'I have written a poem in French on the blackboard.'
- (25) amu ne pǎāc seb khaaye
Amu ERG five apples eat-PERF
'Amu ate five apples. (not necessarily entirely, but each of the apples was affected) (Singh 1998, (37))
- Differences among Mandarin speakers regarding the status of *sha* 'kill' may be due to a strong implicature that is not easily de-contextualized by some speakers
 - Conversely, coercion may be involved in some instances of NC
- (26) 'Les premiers jours d'avril, Ticquet, conseiller au parlement, et même de la grand'chambre, fut assassiné chez lui, et s'il n'en mourut pas, ce ne fut pas la faute du soldat aux gardes et de son portier qui s'étaient chargés de l'exécution et qui le laissèrent, le croyant mort, sur du bruit qu'ils entendirent.' Saint-Simon, *Mémoires* Part 2, XXI,
- 'At the commencement of April, Ticquet, Counsellor at the Parliament, was assassinated in his own house; and if he did not die, it was not the fault of his porter, or of the soldier who had attempted to kill him, and who left him for dead, disturbed by a noise they heard. This councillor, who was a very poor man, had complained to the King, the preceding year, of the conduct of his wife with Montgeorges, captain in the Guards, and much esteemed. The King prohibited Montgeorges from seeing the wife of the councillor again.' Saint-Simon, *Mémoires*, Part I, XV,
- *In practice*, determining which data points are the results of implicatures or coercion is difficult

2 Models of the incompleteness effect

- Most, if not all, of the models of cross-linguistic variation in NC are based on a **part-of** relation: part-of objects, part-of-events, part-of-scales
 - Some models assume culmination is the "default" and NC is the result of a part-selection operation of sorts; some models assume NC is the "default" and culmination is the result of a whole-selection (maximalization) operation
 - Some models assume the locus of variation is at the lexical/sub-lexical level (Koenig and colleagues; Martin, Schäfer, Demirdache); some assume the locus of variation is at the 'first phase syntax' level (Tatevosov); some assume it is at the Voice/Aspect phrase level (Bar-el and colleagues; Kratzer)
- (27) TAM_⊆ (SIT-TYPE_⊆ (arg_{1⊆} ... arg_{n⊆}))

Domain of part-of-relation	<i>Objects</i>	<i>Events</i>	<i>Scales</i>	
	Suo and Ko, Kennedy	Koenig and Muansuwan, Filip, Martin and Schäfer, Bar-el et al., Tatevosov	Koenig and Chief	
Nature of “operation” resulting in NC	<i>Part selection</i>	<i>Whole selection</i>	<i>Underspecification</i>	
	Koenig and Muansuwan, Martin and Schäfer, Bar-el et al., Tatevosov, Kennedy	Kratzer, Filip	Suo and Ko, Koenig and Chief	
Locus of “operation”	<i>Extended functional projection</i>	<i>First phase syntax</i>	<i>Sublexical logical formulas</i>	<i>Model-theoretic interpretation</i>
	Kennedy, Bar-el et al.	Tatevosov	Koenig and Muansuwan, Martin and Schäfer	Koenig and Chief, Kennedy

Table 3: The space of possible approaches to NC

2.1 Object-part models

- Soh and Kuo (2005) claim the source of the effect is in the denotation of proto-patient arguments in Mandarin
- Kennedy (2012) claims culmination with strictly incremental theme verbs comes from quantified proto-patient NPs
- Neither approach will work for Mandarin or Thai, given sections 1.2. and 1.4
- The difference between English and Mandarin w.r.t. to *eat* is puzzling *if* telicity comes from the quantified proto-patient

2.2 Event-part models

- Many different models assume that for the relevant stems in the relevant languages only a subpart of a culminating event is realized at reference time
- Some models assume the base case is NC with C the result of a “completion” operator (Accusative in Kratzer 2004; MAX_E in Filip 2008)
- Some models assume the base case is C with NC the result of a “de-completion” operator (Koenig and Muansuwan 2000; Bar el et al. 2005)

2.2.1 Aspectual event-part model

- The model for the NC proposed in Koenig and Muansuwan 2000 includes an *Impfv* aspect operator within the meaning of gradable stems in Thai

(28) a. Surii tɛɛŋ klɔɔn
 Surii compose poem

‘Surii is composing/was composing/composes (habitually)/will compose/composed a/the poem.’

- b. There is an eventuality ev which is a subpart of an eventuality e' such that in “inertia” worlds, e' is an event of Surii writing a poem.
- c. $\text{Impfv}(ev, \lambda e' \text{compose}(x, y))$

- This model of NC is ...incomplete at best, as it does not account *as is* for the distinction between I(ncomplete) and C(omplete) induced change of state stems
- K&M is theoretically unsatisfying: (1) An aspect operator is included in the meaning of stems and (2) It makes the semantics of Thai stems *more complex* than English stems
- K&M does introduce a useful idea when dealing with the interaction of incomplete stems and (semi-)perfective markers, namely the notion of non-necessarily proper sub-event, what Koenig and Muansuwan were after to model semi-perfectivity ($k^h \hat{u}m$ above)
- It is also useful when dealing with perfect markers cross-linguistically (Nishiyama 2006; Nishiyama and Koenig 2008; Nishiyama and Koenig 2010)

(29) Mou- nannen-mo kore-o tsuka -tte-i- ru.
 Already years-as.long.as this-ACC use -TE-I- NPST
 ‘I have been using this for years now.’ (X=I’m using this.)

(30) Nihon-no eisei-meekaa-wa, ...jitsuyou-eisei juchuu-no michi-o
 Japanese satellite-manufacturer-TOP ...commercial-satellite taking.order-GEN way-ACC
 jijitsu-jou tozasare- -te-i- ru.
 virtually close-CAUS- -TE-I- NPST
 ‘Japanese satellite manufacturers’ ability to take orders for commercial satellites has been virtually shut down.’ (X=There is no way for Japanese manufacturers to get orders for commercial satellites.)

- (31) The meaning of the perfect introduces:
- i. an eventuality ev which satisfies the base eventuality description ϕ such that the temporal trace of a subpart ev' of ev (that also satisfies ϕ) precedes reference time r (or $\tau(ev') \prec r$)
 - ii. a perfect state s , which overlaps reference time r (or $\tau(s) \circ r$) and whose category is semantically a free variable X .

First personal recipe

- K&M’s model borrows inspiration from Smith’s approach to viewpoint aspect, aside from the the lexicalization of the imperfective operator we propose
- The “covert” aspect operator K&M use is shared by the approach to default aspect in Bohne-meyer and Swift (2004) ... and is as uncomfortable

$$(32) \text{DASP} := \lambda P \lambda t_{\text{top}} \exists e \text{REAL}_E(P, t_{\text{top}}, e)$$

Personal Recipe 1. *Covert semantic operators should only be used when semantic coercion is required to map between an independently motivated semantic type/meaning of a phrase and its semantic type/meaning in the broader sentential context*

2.2.2 Modal event-part model

- Martin and Schäfer (2012) propose to model NC for some French roots through a use of a sublexical necessity modal operator (à la Koenig and Davis (2001)) and to account for AC through the selection of distinct modal bases (energetic for agentive causers and circumstantial for inanimate causers)
 - There is a clear similarity between an approach to NC that uses a sublexical imperfective operator (particularly when using inertia worlds à la Dowty 1979, Landman 1992, or Portner 1998) and a sublexical modality operator
 - A sublexical modality approach provides an elegant model of AC
 - A sublexical modality approach is, to some degree, independently motivated by its role in linking.
- (33) $[\text{VP offrir } y \text{ à } z] \rightsquigarrow \lambda x \lambda y \lambda e [\text{offer}'(e) \wedge \text{theme}'(e, y) \wedge \text{recipient}(e, z) \wedge \Box_{\rho} \exists e' (\text{cause}'(e, e') \wedge \text{have}(e') \wedge \text{possessee}(e' y) \wedge \text{possessor}(e', z))]$
- Bar-el et al. (2005) propose a model of NC in Salish not based on sublexical modality, but one that relies on a Root/inertia modality operator
 - Tatevosov (2008) also proposes a modal approach to NC, but the modal operator is not sublexical, but rather associated with a covert functional head, one when for failed attempts, one for partial success

(34) [Imperfective [Root-inertia modality [Voice [Telic [V]]]]]

(35) $[\text{VP} \dots \text{v} \dots [\text{VP Op} [\text{VP} \dots \text{V} \dots [\text{RP} \dots \text{R} \dots]]]]$

(36) $[\text{VP} \dots \text{v} \dots [\text{VP} \dots \text{V} \dots [\text{RP Op} [\text{RP} \dots \text{R} \dots]]]]$

Second personal recipe

- The representation of sublexical modality in a “logical” language in Koenig and Davis (2001) followed Jackendoff’s (1983) Grammatical Constraint: Prefer semantic representations that make your grammatical life easier
- But linking considerations do not independently motivate sublexical modal operators for all I-stems: *Yes* for *offrir*, *No* for *sha* ‘kill’. In other words, it will not model the cross-linguistic variation discussed in various work
- A sublexical modality approach does not naturally model the affectedness effect

(37) Bill had/received/lost/lacked/needed many books.

(38) Sue perceived/noticed/overlooked/missed him.

(39) Bill managed/tried/failed/neglected to read the books.

(40) Sue forced/urged/defied/forbade Bill to go.

Personal Recipe 2.

Sublexical modal operators should only be used when it affects the grammar of languages.

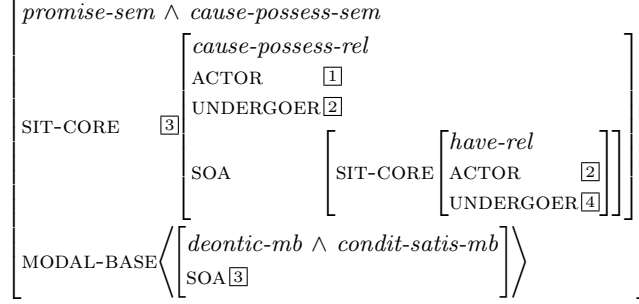


Figure 2: The lexical semantic representation of *promise*

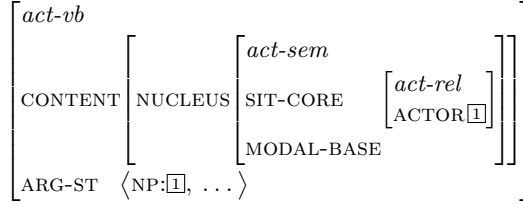


Figure 3: The *act-vb* linking constraint

2.3 Scalar models

- Koenig and Chief (2008) and Chief (2008) explain NC through a model-theoretic difference in the interpretation of various classes of induced changes of state verbs

Definition 1. *An event predicate P describes an induced normative gradable change if and only if whenever it holds of an event e , (i) an activity A holds during an initial subinterval of the temporal trace of e ($\tau(e)$) and a normative gradable property C holds during a final subinterval of $\tau(e)$, (ii) the occurrence of A causes C to hold, and (iii) $d > d'$ (d' is the degree at the initial subinterval of $\tau(e)$ and d the degree at the final subinterval of $\tau(e)$).*

Hypothesis (NC scalar hypothesis). *NC arises when the main verb entails that a normative scalar change occurred with degree $d_0 < d \leq d_N$ rather $d = d_N$*

- The affectedness effect as well as the difference between I- and C-stems in Mandarin and Thai is modelled via the constraint $d > d'$ and the logic of scales
- The difference between languages w.r.t. which stems lead to NC is explained by the difference between \leq and $=$ relations on degrees:
 1. The difference between Hindi and Thai or Mandarin is easily explained. For Hindi, the NC scalar hypothesis only holds of incremental induced changes of state stems not simply induced changes of state stems
 2. The differences between English and Hindi are also accounted for (to the extent there is agreement about English): The NC scalar hypothesis is restricted to dimensional IC (or non-strictly incremental) stems in English (e.g., *clean*, ...)
- The model is *essentially* model-theoretic, as it relies on a notion of entailment (and that is needed to model verbs such as *sha*)

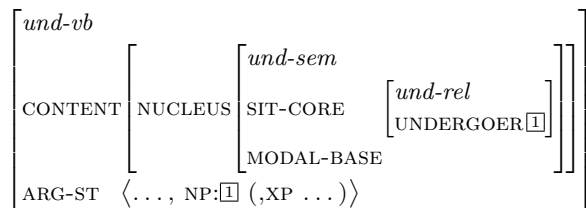


Figure 4: The *und-vb* linking constraint

- There is no great account for the difference across English and Mandarin/Thai for strictly incremental verbs such as *eat*, *if* strictly incremental verbs do not include some measure, at least model-theoretically
 - There is no *semantic* explanation for AC
- (41) ‘Then he half killed me,— kicked and trampled on me, as he’s done many a time’ *Nevermore*, Rolf Boldrewood, 1892.
- (42) ‘One punch and he half killed the guy with it. Broken nose, 2 teeth broken, and he was out cold for a good half minute.’
<http://forum.canucks.com/lofiversion/index.php/t174493.html>

2.4 Whither Agent Control?

The many ways of non-culminating

- Non-culmination means the “natural end-point” (Smith 1997) is not necessarily reached. So, NC sentences do not entail that the result holds or the standard/maximum on the scale has been reached. But what is entailed then?
 - Tatevosov distinguishes between failed attempts and partial success non-culminations; Demirdache and Martin (2014) distinguish between zero-result and partial-result NC.
 - The processes involved in “deriving” the NC reading seem quite different.
- (43) I cleaned my system and still found file fragments on my C:drive, why is that? (Filip 2008)
- (44) I emptied the tub, but not completely (Rappaport Hovav 2008)
- (45) Ivan taught me Russian, but I did not learn anything (Demirdache and Martin 2014)
- (46) Le médecin l’a soigné, mais il n’est pas guéri du tout, il ne va pas mieux du tout. (Demirdache and Martin 2014)
 The doctor treated him, but he is not cured at all, his state didn’t improve at all.
- (47) Clairement, cette situation leur a bel et bien montré le problème! C’est fou qu’ils ne l’aient pas vu! (Martin and Schäfer 2012)
 ‘Clearly, this situation well and truly showed them the problem! It is crazy that they didn’t see it!’
- The denotations of NC accomplishments include at least the following:
 1. *Metonymy*: Actions performed by agents without any necessary change (45) and (46); possibly (43)
 2. *Coercion*: ϵ -vagueness: (26) above or possibly (44) (Jackendoff 1991)
 3. *Individual counterfactuals*: Reasoning on alternative “normal” proto-patients

The various possible implicatures

- When deciding on how to model NC and AC, we need to decide on what is an entailment or an implicature or what is part of a stem’s meaning vs. a pragmatic effect:
 1. For Koenig and Chief (2008), affectedness (defined as non-culminating change) is an entailment of incomplete stems in Mandarin and Thai; it is an implicature in Demirdache and Martin (2014)
 2. For Martin and Schäfer (20012), AC is a consequence of the meaning of incomplete stems (they include a sublexical modal operator with distinct modal bases). We would like to suggest that the AC is a pragmatic condition on suspension of (relevance) implicatures
 - One of the possible reasons for the AC is that it is harder to select parts of events with inanimate subject (see (48)), because there is no salient subsets of events the sentence can be understood as describing when the causer is inanimate.
 - Gyarmathy and Altshuler (2017) suggests abductive processes of interpretation might be responsible for the AC
- (48) Hans/#Ce fait la flattera pendant des heures, mais elle ne se sentira pas flattée pour autant.
‘Hans/#This fact will flatter her for hours, but she won’t feel flattered because of that.

3 Conclusion

- We have suggested that a model of NC must involve scalarity and that requires an essentially model-theoretic model (aside from personal recipes preferences),
- We have suggested that AC may not be a matter of semantics
- We have along the way made some meta-theoretical remarks:
 1. The space of possible explanations for the NC and AC is relatively well explored
 2. The fact that languages differ on how far they want to push NC is also relatively well established
 3. But the boundaries of NC (does this verb lead to NC in this language?), what are the possible target categories of events for NC (and whether they are the same across languages) and what is implicated vs. the result of coercion vs. part of the meaning in any or across languages remains unclear or in dispute
- Until these issues are solved, it is hard to be sure of what the best model of NC or whether there should be distinct models for distinct classes of languages
- We do not need just more data to solve these remaining problems, we need more reliable data. Arm-chair linguistics might not be enough, but experimental linguistics may not be appropriate for the kind of judgements that are needed.

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