Situation sequences, aspect, and cotemporal results

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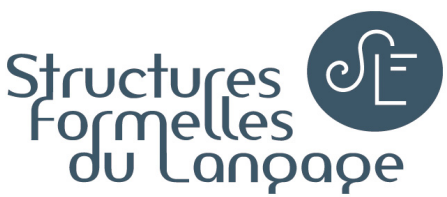


Haitian Creole factativity

(1) a. Vèdye bati yon kay.
Vèdye build house
'Vèdye built a house.'

b. Jan kouri pandan de zè tan.
Jan run pendant two hour time
'Jan ran for two hours.'

c. Mari kònnèn Jan.
Mari know Jan
'Mari knows Jan.'

"factativity" (Welmers & Welmers 1968): bare eventives are interpreted in the past while bare statives are interpreted in the present (more complicated than that of course, but it will do for a starting point).

HC examples from Dechaine 1991, Lefebvre 1996, Herby Glaude (p.c.).

Haitian Creole *ap*

ap(r)(e) < Fr. *après*

(2) a. Vèdye ap bati yon kay.
Vèdye AP build house
'Vèdye is building a house.'

b. Jan ap kouri.
Jan AP kouri
'Jan is running.'

c. Mari ap kònnèn Jan.
Mari AP know Jan
'Mari will know Jan.'

(3) Mari (a-)(v)a malade.
Mari FUT malade
'Mari will be sick'

Spears 1990, Lefebvre 1996: The future with *ap* is definite/near/certain future, *(a)-(v)a* is indefinite/not near/not as certain.

Spears 1990, Lefebvre 1996: Progressive *ap* and future *ap* are two different lexical items.

Observation (Dechaine 1991): The eventive and the stative bear roughly the same temporal relationship (décalage) to each other, with or without *ap*, so *ap* is likely to be one item, not two.

But normally we can't take advantage of this décalage, because the semantics of perfective, progressive, and future are too different, and don't compose in the right way.

(4) hypothesis 1: ⟦ap⟧ = progressive, "bare" eventives have a null perfective morpheme ⇒
⟦ap + stative⟧ = progressive stative ✗
⟦ap + eventive⟧ = progressive eventive ✓

(5) hypothesis 2: ⟦ap⟧ = future, "bare" eventives have a null perfective morpheme ⇒
⟦ap + stative⟧ = future stative ✓
⟦ap + eventive⟧ = future eventive ✗

(6) hypothesis 3: ⟦ap⟧ = progressive, eventives are inherently perfective ⇒
⟦ap + stative⟧ = progressive stative ✗
⟦ap + eventive⟧ = progressive perfective ✗

(7) hypothesis 4: ⟦ap⟧ = future, eventives are inherently perfective ⇒
⟦ap + stative⟧ = future stative ✓
⟦ap + eventive⟧ = future + perfective ✗

Proposal: change the semantic model so that we *can* take advantage of the eventive-stative décalage observation.

The basic meanings will be roughly as in hypothesis 4 ($[\![\text{ap}]\!] =$ future, eventives are inherently perfective) but they will be modeled differently from usual.

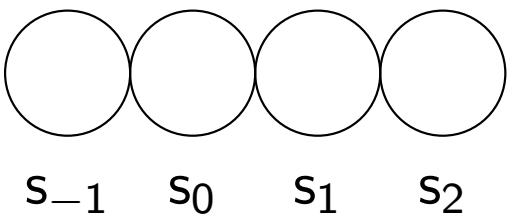
We will introduce the idea of a *situation sequence* which will allow us to construct the right meanings for factativity and *ap*.

Situation sequences

We define a sequence of situation arguments to represent the sequence of situations in the world that we are talking about:

(8) $\ldots, (s_{-2}), (s_{-1}), s_0, (s_1), (s_2), \ldots$

(9)



We also define the following pred(ecessor) and suc(cessor) functions for any s_n:

(10) a. $pred(s_n) = s_{n-1}$
b. $suc(s_n) = s_{n+1}$

Analysis of factativity

(11) a. stative predicates: ⟦Mari kònnèn Jan⟧(s) = 1 iff MARI-KNOW-JAN(s)

b. eventive predicates: ⟦Vèdye bati yon kay⟧(s) = 1 iff VÈDYE-BUILD-A-HOUSE(*pred*(s))

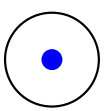
(the predicate *Vèdye bati yon kay* ≠ the property VÈDYE-BUILD-A-HOUSE!)

Let → designate an event and • designate a state.

(12)

a. ⟦Mari kònnèn Jan⟧(s_0)

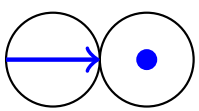
MARI-KNOW-JAN



s_0

b. ⟦Vèdye bati yon kay⟧(s_0)

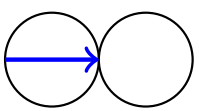
VÈDYE-BUILD-A-HOUSE



s_{-1} s_0

c. ⟦Jan kouri⟧(s_0)

JAN-RUN



s_{-1} s_0

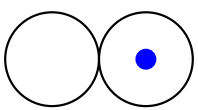
Analysis of *ap*

(13) $[\![\text{ap}]\!] = \lambda p\ \lambda s\ .\ p(\text{suc}(s))$

(14)

a. [Mari ap kònnèn Jan](s_0)

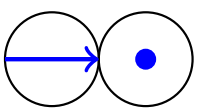
MARI-KNOW-JAN



s_0 s_1

b. [Vèdye ap bati yon kay](s_0)

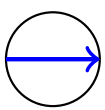
VÈDYE-BUILD-A-HOUSE



s_0 s_1

c. [Jan ap kouri](s_0)

JAN-RUN



s_0

This is only a partial analysis because the denotations given here only give the location in the sequence, not other aspectual meaning such as:

- present relevance of "perfective" (really a resultative), where the result state caused by s_{n-1} is still ongoing at s_n

(15) Mwen pèdi linèt mwen.
I lose glasses my
'I lost my glasses (and they're still lost).'

- progressive reading when n=0 for eventives, regular stative reading when n=0 for statives

The reasons for these meanings should lie in the conceptual system/model/pragmatic interpretation of these sequences as causal chains.

Looking for *pred*(s) aspectual morphology

In HC we said that *pred*(s) was part of the meaning of bare eventive predicates. Is there ever an aspectual morpheme whose denotation is λp λs . p(*pred*(s))?

Plausibly, resultative/experiential perfects, e.g. Bulgarian perfective perfect participle (Pancheva 2003, p.c.):

(16) Ivan e postroil pjasâčna kula.
Ivan be-3SG.PRES build-M.SG.ACTIVE sand castle
'Ivan has built a sandcastle.' (telic; resultative)

(17) Ivan e stroil pjasâčna kula.
Ivan be-3SG.PRES build-PERF.M.SG sand castle
'Ivan has built (a) sandcastle(s) before.' (atelic, experiential)

Looking for *pred*(s) aspectual morphology

What about Japanese *-te*?

(18) Ken-ga ie-o tate-te i-ru
Ken-NOM house-ACC build-TE be-NONPAST
'Ken has built a house.' (resultative)

(19) Tarou-ga zyuuken-mo ie-o tate-te
Taroo-NOM ten-CL-even house-ACC build-TE
i-ru
be-NONPAST
'Taroo has the experience of having built as many as ten houses.' (experiential)

BUT there's another reading of (18): 'Ken is building a house.'

Either *-te* is not *pred*, or there's something different going on with the predicate.

(20) Benkyou si-te, ki-mashi-ta.
'study do-TE come-DIST-PAST
'I studied and came,' lit. 'Having studied, (I) came.'

Possibly relevant: as Nishiyama (2006) points out, there is a consensus that *-te* derives from a historical perfective morpheme.

Possible solution: world/lexical knowledge of predicates allows a cotemporal result (so s_{-1} and s_0 happen at the same time), making certain predicates effectively atelic.

Possible solution: cotemporal result activities

Krifka, 1998, Filip and Rothstein 2005, Filip 2007: event part structure (subevents and superevents) rather than sequences. Strictly incremental verbs involve homomorphisms between the object and the event.

(21) a. Mary ate apples. (strictly incremental verb, but object isn't quantized, so atelic)
b. Mary ate 3 apples. (strictly incremental verb, object is quantized, so telic)

Copley & Harley 2014 adapt this for sequences: Mary, in s_n, is the agent of an action which results in her eating non-quantized *apples*, in which case (via the homomorphism) s_{n+1} begins immediately; or quantized *3 apples*, in which case s_{n+1} can't begin until she has eaten the 3 apples.

Or: Ken in s_n is the agent of an action which either immediately has the cotemporal result that he is working on a house, or has the temporally subsequent result that there is a house.

Possible solution: cotemporal result activities

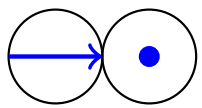
Now the situations *really* can't be Davidsonian eventuality arguments, because there is no way to individuate two cotemporal Davidsonian eventualities in an activity – they have the same participants and the same temporal trace. Also, the result situation in cotemporal result activities isn't necessarily a state per se.

However, $\rightarrow$ could easily designate an input of energy and $\bullet$ a situation without an input of energy of its own. A feature $\pm$*dynamic* on situations might be one way to think of this; see Copley & Harley 2014 for another way. ‘

You may be worried about how such activities could have two arguments when they don't get the extra restituitive reading of ‘again’. We can talk about this later.

Cotemporal results

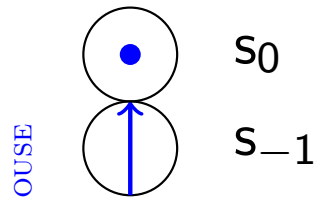
(22) a. KEN-BUILD-HOUSE



s_{-1}, s_0

$\tau(s_{-1})\tau(s_0)$

b.



(23) a. telic predicates: as s_{n-1} ends, s_n begins

b. cotemporal result activities: s_{n-1} cotemporal with s_n

c. $[\![$Ken-wa ie-o tate-te i-$]\!] = \lambda s$. KEN-BUILD-HOUSE(s); differs with world/lexical knowledge and/or syntax as to whether the result happens at the same time or only starts after

d. $[\![$-te$]\!] = \lambda p\ \lambda s$. p(pred(s))

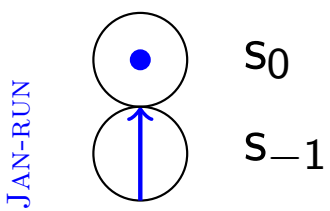
Haitian Creole activities can't involve cotemporal results

If activities were allowed to have cotemporal results in HC, bare activities would have a present progressive reading as well as *ap* + activity, which isn't the case.

(24) a. Jan kouri

$= 1$ iff $[\lambda s\ .\ \text{run}(\text{pred}(s)) \ \&\ \text{agent}(\text{Jan}, \uparrow s)](s_0)$

$= 1$ iff $\text{run}(s_{-1})\ \&\ \text{agent}(\text{Jan}, \uparrow s_{-1})$ ✗

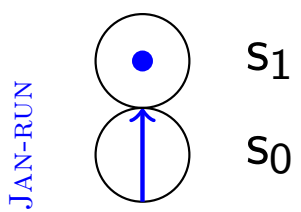


b. Jan ap kouri

$= 1$iff $[\lambda s\ .\ \text{run}(\text{pred}(\text{suc}(s))) \ \&\ \text{agent}(\text{Jan}, \uparrow s)](s_0)$

$= 1$ iff $[\lambda s\ .\ \text{run}(s)](s_0)\ \&\ \text{agent}(\text{Jan}, \uparrow s_0)$

$= 1$ iff $\text{run}(s_0)\ \&\ \text{agent}(\text{Jan}, \uparrow s_0)$ ✓



N. B. $\uparrow$ maps a situation to the event in it

Hypothesis: Activities can vary cross-linguistically. HC has only singleton activities, while Japanese can also (or only) have cotemporal-result activities.

Typological prediction 1: Interactions of aspect and activities

	only singleton activities	(singleton and) cotemporal-result activities
pred(s) aspect	resultative/experiential	*-te*-like
suc(s) aspect	*ap*-like	x

- Resultative/experiential aspect is predicted to exist (and it does; Bulgarian).
- It's also predicted that x exists in some language, where x + stative = near future, x + cotemporal result activity = near future, and x + telic (or singleton activity) = progressive.

Typological prediction 2: An analogue to factativity

There should be "telictitive" languages that have a quasi-factative effect, but activities pattern with statives; i.e., anteriorization patterns with telicity rather than dynamicity. There are: Sencoten (Salish; Kiyota 2008), Mandarin (Smith 2008)

(25) a. k'^{w} amk'^{w}əm tiʔə Jack
strong D Jack
'Jack is strong.'

b. q'^{w}áy tə Jack
die D Jack
'Jack died.'

c. ləʔə tə t'ĩləm tə Jack
AUX D sing D Jack
'Jack is singing. / *Jack sang.'

Mandarin (Smith 2008)

xiānggǎng méiyǒu bǐguān zìshoǔ de tiáojiàn
Hong Kong not-have close self-self DE situation.
Hong Kong does not have the option of closing its doors.

zài dí sīkē jiézòu zhōng, Xióng kuáng fàng de qián hòu yáobǎi,
at disco rhythm inside, Bear wild style DE front back sway,

Xióng chén jīn zài zìjǐ chuàngzào de wǔ dǎo zhōng.
Bear deeply immerse in own create DE dance in.

Inside the disco rhythms, Bear sways wildly back and forth, deeply immersed in a dance of his own creation

a Wáng Jizhì fāmíng zhōngwén dǎ zìjǐ
Wang Jizhi invent Chinese word processor
Wang Jizhi invented the Chinese word processor

Typological predictions 1 + 2

	only singleton activities	(singleton and) cotemporal-result activities
	possibly factative, never telictitive	possibly telictitive, never factative
pred(s) aspect	resultative/experiential	-*te*-like
suc(s) aspect	*ap*-like	x

Typological predictions 1 + 2

- Predicts that factative languages may have column 1 but no column 2 aspects. Rolle (2012) has a good list of factative languages.
- Predicts that telictitive languages may have column 2 but no column 1 aspects.

Mandarin: are *guo*, *-le* resultative markers? (Li, Thompson, and Thompson 1982)

(26) a. wǒ shuāiduàn-guo tuǐ
I break-GUO leg
'I broke my leg (it has healed since).'

b. wǒ shuāiduàn-le tuǐ
I break-LE leg
'I broke my leg (it's still in a cast).'

(27) zhèi-ge mùguā hěn tián le
this-CL papaya very sweet LE
'This papaya is very sweet (and that's somehow relevant)'

Sencoten: Has a *-te iru*-like morpheme k^{w}ɬ (Kiyota, 2008)

Conclusion

- Situation sequences help explain aspect (here, HC *ap* and Japanese -*te*).
- This approach raises the question as to whether activities may come in two kinds, namely singleton and cotemporal-result; the latter is possible because causal structure $\neq$ temporal structure.
- If this is so, then assuming that languages may or may not have cotemporal result activites, some typological predictions are made.

Thank you!
Merci!