

# An account of morphological tenselessness in Gitksan inspired by SOT in English

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## Introduction

This paper proposes a novel account of Gitksan, a morphologically tenseless language, based on a new observation about sequence of tense (SOT) phenomena in English present-under-*will* constructions. The account involves a temporal pronoun with no tense operator and serves as an empirically transparent alternative to the covert tense account (Jóhannsdóttir & Matthewson 2007) of Gitksan, with implications for morphologically tenseless languages more generally.

## Temporal flexibility of present-under-*will* in English

In proposing the SOT rule for English, Ogihara (1996) attributes the back-shifted and simultaneous readings of (1) to the LFs before and after application of the SOT rule, respectively, arguing that the ‘null’ tense after the rule application is a relative present tense.

(1) I heard that Sally was in London. (Enç 1987)

This paper argues that any tense morpheme after application of the SOT rule lacks a tense operator and is itself compatible with both simultaneous and back-shifted references. Evidence comes from the partial overlap of the interpretation of the present morpheme with that of the past morpheme under *will* (Abusch 1998). The present under *will* has a back-shifted reading with accomplishment (2) and achievement predicates and a simultaneous reading with a stative predicate (3a), while the past under *will* has a consistent back-shifted reading in (2) and (3b).

(2) On May 21, I **will** give an A to the first student who turn{-s, -ed} in a paper. (Abusch 1998)

(3)a. On March 1, the doctor **will** give medicine to people who **are** sick.

b. On March 1, the doctor **will** give medicine to people who **were** sick.

Notice that both (2) and (3a) are SOT contexts; this shows that tense morphemes subject to the SOT rule are temporally flexible, allowing both back-shifted and simultaneous readings as permitted by the aspectual properties of the sentence. I assume that every T(ense) node has a covert temporal pronoun denoting the reference time (RT) (4a). The present (4b) and past (4c) morphemes denote a presuppositional operator restricting the RT (Cable 2013).

(4)a.  $[[\text{pro}_n]]^g = g(n)$     b.  $[[\text{PRES}]]^c = \lambda t: t = t_c. t$     c.  $[[\text{PAST}]]^{c,i} = \lambda t: t < t_i. t$  (Heim 2015)

In, (2) (LF in (5), ignoring modality), the SOT rule deletes the present morpheme in the relative clause, leaving  $\text{pro}_2$  in T; with no anteriority restriction,  $\text{pro}_2$  itself is compatible with both back-shifted and simultaneous readings, but the latter is ruled out by the Bennett and Partee effect (1987), in which the matrix ET is too short to encompass the entirety of the event of turning in a paper. A forward-shifted reading is ruled out by the upper limit constraint (ULC) (Abusch 1997).

- (5)  $[[On\ M.\ 21,\ I\ PRES\ pro_1\ will\ PFV\ give\ an\ A\ to\ the\ first\ student\ who\ pro_2\ PFV\ turn\ in\ a\ paper]]^{g,c} = \exists t[g(1) < t \ \&\ \text{May-21}(t) \ \&\ \exists e[\tau(e) \subseteq t \ \&\ give(A)(i[\lambda x.\ first\ student(x) \ \&\ \exists e'[\tau(e') \subseteq g(2) \ \&\ turn\ in(paper)(x)(e')]])](speaker)(e)]]$  where  $g(1)=t_c$

On the other hand, in (3a), with a stative predicate in the relative clause, a simultaneous reading of  $pro_2$  is available after the SOT rule applies. This time, a back-shifted reading is ruled out by Maximize Presupposition, as the past-tensed counterpart (3b) (LF in (6)), with the SOT rule inapplicable, has a back-shifted reading with the anteriority presupposition of the semantic past.

- (6)  $[[On\ M.\ 1,\ the\ doctor\ PRES\ pro_1\ will\ PFV\ give\ medicine\ to\ people\ who\ PAST\ pro_2\ PFV\ be\ sick]]^{g,c,i} = \exists t[g(1) < t \ \&\ Mar.-1(t) \ \&\ \exists e[\tau(e) \subseteq t \ \&\ give(medicine)(i[\lambda x.\ person(x) \ \&\ \exists e'[\tau(e') \subseteq g(2) \ \&\ sick(x)(e')]])](doctor)(e)]]$  where  $g(1)=t_c, \ g(2) < \tau(e)$

In summary, a present-tensed relative clause under *will* has a single LF with no tense operator, which would have both back-shifted and simultaneous readings if it were not for the Bennett and Partee effect or the pragmatic competition with a past-tensed counterpart.

### Account of Gitksan with no tense operator

In Gitksan, a morphologically unmarked sentence is compatible with both ‘past’ and ‘present’ readings but not a future reading (7), which led Jóhannsdóttir & Matthewson (2007) to propose a covert absolute non-future tense (8) in addition to an overt future marker *dim* (9).

- (7) Luu am=hl      goot=s      Diana  
in    happy=CN    heart=PN Diana  
‘Diana {is happy/was happy/\*will be happy}      (8)  $[[NON-FUT_i]]^{g,c} = g(i): g(i) \leq t_c$   
(9)  $[[dim]]_{<t, i>} = \lambda P_{<i, t>}. \lambda t. \exists t' [t' < t' \ \&\ P(t')]$   
(Jóhannsdóttir and Matthewson 2007)

Novel data show the same ambiguity in attitude complements (10) and relative clauses (11).

- (10) a. Simultaneous: *Mary is calling her teacher to fake her sickness. Mary says to herself:*  
b. Back-shifted: *Failing to finish homework, Mary plans to lie that she was sick yesterday:*

Dim ha'niigoot-t    [(#dim)    siipxw-'y]  
FUT think-3SG.II   [(#FUT)    sick-1SG.II  
‘She (the teacher) will think that I am/was sick.’

- (11) a. Simultaneous: *Invitation for a party in 3 months. People who are sick then can't enter.*  
b. Back-shifted: ... *Those who were sick within 2 weeks before the party can't enter.*

Nee=dim=dii=dip    ts'ilim    anook-t    [naa=hl    (#dim)    siipxw-it]  
NEG=FUT=FOC=1PL.I    in    allow-3SG.II    [who=CN    (#FUT)    sick-SX]  
‘We will not let in people who are/were sick.’

The infelicity of *dim* in (10, 11) despite the subordinate ET following the UT shows that the proposed covert non-future tense is a relative tense taking the matrix ET as the evaluation time.

However, a covert tense morpheme is not necessary. Notice that the temporal interpretations of every clause in Gitksan are similar to those of embedded clauses in English after the SOT rule applies (5): both are ambiguous between back-shifted and simultaneous readings. Therefore, I

argue that the LFs of Gitksan resemble the LFs for SOT phenomena in English: every clause in Gitksan has a null temporal pronoun subject to the ULC and lacks an anteriority operator. In a matrix clause (7, LF in (12)), the upper limit of  $\text{pro}_1$  is the speaker's 'now,' or the UT.

(12)  $\llbracket \text{pro}_1 \text{ PFV } \text{Luu am=hl } \text{goot=s Diana} \rrbracket^g = \exists e[\tau(e) \subseteq g(1) \ \& \ \text{happy}(\text{Diana})(e)]$

### **Conclusion**

This paper offers a new take on the partial overlap in the interpretations of the present and past morphemes under *will* in English, which in turn supports an analysis of the SOT phenomena as arising from the interpretive flexibility of a temporal pronoun without a tense operator. By expanding this analysis to Gitksan, it captures the empirical similarities between English and Gitksan that are masked by the difference in morphological tense marking. One cross-linguistic consequence of the proposal is that every language has a null temporal pronoun (with the exception of languages with only existential tenses), but only morphologically tensed languages have tense morphemes, which denote a tense operator that encodes anteriority or simultaneity. This is a more empirically transparent alternative to postulating a covert tense morpheme.

### **References**

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