Two Paths to Habituality: Tlingit Habitual Mode and English Simple Verbs

Seth Cable
University of Massachusetts Amherst

1. Introduction

(1) Two Interrelated Puzzles

a. Simple Verbs in English Can Express ‘Habituals’:
The English sentence below has a very simple form, but seems to express a very complex claim about the subject’s habits, propensities, dispositions, etc. HOW??

(i) My father eats salmon.

b. Imperfective Verbs & Habitual Verbs in Tlingit
There are two means for translating the English habitual sentence in (1a) into Tlingit (Na-Dene; Alaska, British Columbia, Yukon).

(i) Imperfective Mode
Aŋx̱ eeshch t’á aŋxá. ¹
1sgPOSS father.ERG king.salmon 3O.IMPRV.3S.eat
My father eats king salmon

(MD) ²

(ii) Habitual Mode
Aŋx̱ eesh xáat uŋxáaych.
1sgPOSS father salmon 3O.HAB.3S.eat
My father eats salmon.

(SE)

c. Questions:
(i) What is the morphosyntactic & morphosemantic difference (if any) between the two Tlingit verbal forms in (1b)?
(ii) How does either of these verbal forms in Tlingit compare syntactically / semantically to the simple English verb form in (1a)?


² Throughout this report, I will indicate whether a Tlingit sentence was (i) constructed by myself and judged by the elders to be acceptable, or (ii) actually constructed and offered by the elders themselves. In the former case, the sentence will be followed by a ‘(C)’, for ‘constructed’. In the latter case, I will write the initials of the speaker who provided the sentence: (LA) for Lillian Austin, (MD) for Margaret Dutson, (SE) for Selena Everson, (CM) for Carolyn Martin, and (JM) for John Martin.
(2) **Broader, Overarching Questions:**

a. What do the answers to the questions in (1a) and (1c) tell us about how ‘habitualy’ / ‘genericity’ is encoded/expressed in natural language?

b. How well does the answer to (1c) (regarding Tlingit) generalize to what seem to be similar cases in other languages of the world? (Carlson 2012)

(3) **Two Ways to Express Habituals in African American English (Green 2000)**

a. Bruce *sing*. ‘Bruce sings’

b. Bruce *be singing*. ‘Bruce sings’

(4) **Two Ways to Express Habituals in Czech (Filip 2018)**

a. Honza *sedí* v hospodě

b. Honza *sedává* v hospodě

John sits.IMPRV in pub

John sits.HAB in pub

John sits in a pub

John sits in a pub.

(5) **Two Ways to Express Habituals in Hebrew (Boneh & Doron 2008)**

Ya’el *

Yael went (used to go) to work by bus.

(6) **Preview of the Major Claims**

a. There are important semantic and (morpho-)syntactic differences between ‘imperfective habituals’ in Tlingit (1bi) and ‘habitual-marked habituals’ (1bii).

(i) **Form of Imperfective Habituals (1bi)**

Habitual semantics is directly contributed by the imperfective aspect, which has a modal semantics (Deo 2009, Arregui *et al.* 2014, *inter alia*)

\[
[\text{TP} \quad T \quad [\text{AspP} \quad \text{IMPRV}_{\text{HAB}} \quad [\text{VP} \quad \text{my father eat salmon}] \ldots ]]
\]

(ii) **Form of Habitual-Marked Habituals (1bii)**

‘Habitual’ marking is licensed by the presence of a local, c-commanding temporal quantifier, which may be implicit / covert

\[
[\text{TP} \quad \text{TempQuant} \quad [\text{TP} \quad T \quad [\text{AspP} \quad \text{ASP} \quad [\text{VP} \quad \text{my father eat salmon}] \ldots ]]
\]

b. Simple verbs in English (1a) can underlyingly have the structure of *either* a Tlingit imperfective (6ai) or a Tlingit habitual (6aii).
(7) **Outline of the Talk**

a. **Section 2:** Background on Tlingit language and fieldwork methodology

b. **Section 3:** Three key inflections in Tlingit: Perfective, Imperfective, Habitual

c. **Section 4:** Formal semantic background: perfective, imperfective, and tense

d. **Section 5:** Initial Analysis of Simple Verbs in English ((Im)Perfective)

e. **Section 6:** English simple verbs with quantificational temporal adverbs: Towards two very different sorts of ‘habituality’

f. **Section 7:** Analysis of ‘Habitual’-Mode Marking in Tlingit as Concord With Temporal Quantification, and Broader Consequences

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2. **Linguistic and Methodological Background**

(8) **The Tlingit Language (Lingít): A Few Bullet Points**

- Traditional language of the Tlingit people of Southeast Alaska, Northwest British Columbia, Southwest Yukon Territory (shaded area in map below) 

- Member of the Na-Dene language family; distantly related to Athabaskan languages (e.g. Navajo, Slave, Hupa). Shares the complex templatic morphology of this family.

- Highly endangered; ≤ 200 speakers, all over 60, mostly over 70. Several fluent/near-fluent second language learners; a few raising their children in the language.

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Notes on the Data and the Methodology

• Unless otherwise noted, all data below were obtained through interviews with native speakers of Tlingit (2016, 2017)

• Seven fluent elders have participated; all are residents of Juneau, AK; all are speakers of the ‘Northern Dialect’ of Tlingit
  o Lillian Austin (Yaḵduláḵt)
  o George Davis (Kaxwaan Éesh)
  o Margaret Dutson (Shak’sháani)
  o Selena Everson (Ḵaséix)
  o William Fawcett (Kóoshdaak’w Éesh)
  o Carolyn Martin (K’altseen)
  o John Martin (Keihéenák’w)

• Interviews lasted two hours and were held in a classroom at the University of Alaska Southeast; 2-4 elders were present at each interview.

• Speakers were asked to translate English sentences paired with particular ‘scenarios’, as well as to judge the ‘correctness’ (broadly speaking) of constructed Tlingit sentences relative to those ‘scenarios’ (Matthewson 2004).

• The scenarios were described to speakers in English, both orally and with accompanying written text.

3. Basic Description of Tlingit Imperfective, Perfective, and Habitual Modes

The ‘Declarative Modes’ of Tlingit (Leer 1991)

A verb heading a declarative (main) clause can appear in one of the following five (temporal/aspectual) inflections 4, 5

a. Future
b. Potential
c. Perfective
d. Imperfective
e. Habitual

The three of main focus here today....

In the following subsections, I will provide a relatively informal overview regarding the form and semantics of these three inflections in (10c, d, e)....

4 In addition to these five, Leer (1991) also identifies a now-defunct ‘Realizational’ mode, which seems to have left the language in the past few hundred years, but is preserved in certain narratives and songs.
5 For more information on the ‘Future’ and ‘Potential’ modes, their form and semantics, see Cable (2017a).
3.1 The Perfective and Imperfective Modes of Tlingit

(11) Form of ‘Perfective Mode’ Verbs in Tlingit

a. Perfective prefix wu-

b. No conjugation prefix

c. Verbal classifier prefix is from the ‘I-series’ (a.k.a.’ [+I]-Classifier’)

d. Perfective stem form; generally predictable from other verbal inflections

Illustration:

\[
\begin{array}{llllll}
A_{x} & tláach & wé & sakwnéin & aawaxáa. & (MD) \\
A_{x} & tláa-ch & wé & sakwnéin & a-wu-∅-ya-χa-y \\
1sgPOSS & mother-ERG & DEM & bread & 3O-PRV-3S-[+I]-eat-STEM.FORM \\
& & & & & \\
\end{array}
\]

My mother ate the bread.

(12) Meaning of Perfective Mode Verbs in Tlingit (Informal Description)

a. In a main clause, generally refers to events taking place in the past
   • Subordinate clauses are a different and more complicated matter

b. Indicates that the event described occurs at or within a particular (topical) time

   \[\leftarrow \text{[TopicTime} \text{---- [eating]} \text{-------]} \text{---- SpeechTime} \rightarrow \]

   \text{[+I]-Classifier’}

c. The features in (12a,b) together lead to an inference (with main clause
   perectives) that the event in question is ‘over’/‘completed’ by speech time.

(13) Form of ‘Imperfective Mode’ Verbs in Tlingit

a. No aspectual prefix; no conjugation prefix

b. (i) With ‘Eventive’ (‘Dynamic’ / ‘Non-Stative’) Verbs:
   Verbal classifier is from the ‘non-I Series’ (a.k.a.’[-I]-Classifier’)

(ii) With ‘Stative’ (‘Non-Dynamic’ / ‘Non-Eventive’) Verbs:
   Verbal classifier is from the ‘I-series’ (a.k.a.’[+I]-Classifier’)

c. Imperfective stem form; not predictable from any other verbal inflection

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6 As documented by Cable (2017b), despite its name, the ‘perfective’ mode of Tlingit also seems to allow an
interpretation more akin to a ‘perfect’, which places the event described before a particular (topical) time. For
purposes of our discussion here, I set aside this secondary interpretation of the perfective mode.

7 There is evidence to suggest that, as in other languages of the Pacific Northwest, this ‘completion inference’ with
Tlingit perfectives is merely a defeasible implicature, and is not part of the inherent meaning of the perfective mode.

8 Properly speaking, the description in (13) holds for what Leer (1991) dubs the ‘primary imperfective’ of a verb.
For purposes of our discussion, I set aside here the so-called ‘secondary imperfectives’ of Tlingit.
(14) **Illustration of Imperfective Mode in Tlingit**

a. **Eventive Verb in Imperfective:**
   \[ A^\text{x} \text{eesh} \text{k\text{\text{"aaxwee} adan\text{\text{"a}} (MD) } \\
   A^\text{x} \text{eesh k\text{\text{"aaxwee} a-o-da-na-'} } \\
   1\text{sgPOSS father coffee 3O-3S-[d, -I]-drink-STEM.FORM } \\
   \text{My father drinks coffee. / My father is drinking coffee.} \]

b. **Stative Verb in Imperfective**
   \[ A^\text{x} \text{tl\text{\text{"aach asix\text{\text{"a}n ax \text{eesh. } } } \\
   A^\text{x} \text{tl\text{\text{"a-ch a-o-si-\text{\text{"a}n-y ax \text{eesh } } } } \\
   1\text{sgPOSS mother-ERG 3O-3S-[s, +I]-love-STEM.FORM 1sgPOSS father } \\
   \text{My mother loves my father.} \]

(15) **Meaning of Imperfective Mode Verbs in Tlingit (Informal Description)**

a. Can be used to describe eventualities (events/states) holding in past or present

b. As with ‘imperfective aspect’ across languages, there are three principle meanings that imperfective mode can contribute:

   (i) **Ongoing Event (Progressive) (14a)**
   With eventive verbs, indicates that the event described is occurring throughout a particular (topical time).

   \[ \text{[ ……… DRINKING ………]} \]
   \[ \leftarrow \text{------------------} \text{[TopicTime ---- ]} \text{--------------------------------------} \rightarrow \]

   (ii) **Ongoing State (14b)**
   With stative verbs, indicates that the state described holds throughout a particular (topical) time.

   \[ \text{[ ……… LOVING ………]} \]
   \[ \leftarrow \text{------------------} \text{[TopicTime ---- ]} \text{--------------------------------------} \rightarrow \]

   (iii) **Habitual (14a)**
   With eventive verbs, indicates that there was throughout a particular (topical) time a general habit, propensity, disposition, for events of the kind described to occur.

   \[ \text{[ … HABIT-OF-DRINKING …]} \]
   \[ \leftarrow \text{------------------} \text{[TopicTime ---- ]} \text{--------------------------------------} \rightarrow \]

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9 To describe a future eventuality, a verb in Tlingit must bear either the ‘future mode’ or the ‘potential mode’ (Cable 2017a, 2017b, to appear).
Another Key Feature of the Imperfective: Generics

As with ‘imperfective aspect’ across languages, a curious effect occurs when an imperfective mode verb in Tlingit combines with an indefinite subject.

a. If an imperfective verb receives an ‘ongoing event’ interpretation (15bi), then an indefinite subject receives a ‘normal’ existential reading.

Keitl  asháa.
Keitl  a-∅-∅-sha-:
dog  3O-3S-[I]-bark-STEM.FORM
A dog is barking.  (C)

b. If an imperfective verb receives a ‘habitual’ (15biii) [or an ‘ongoing state’] interpretation (15biii) [(15biii)], then an indefinite subject receives a ‘generic’ (‘quasi-universal’) reading.

Keitl  asháa.
Keitl  a-∅-∅-sha-:
dog  3O-3S-[I]-bark-STEM.FORM
Dogs bark.  (MD)(LA)

Note: In this talk, I will largely be setting aside ‘generic sentences’ of the kind in (16b).

- But the interactions between these ‘generic’ readings and imperfective aspect will be important for some later arguments…

3.2 Habitual Mode(s)

The Sub-Types of Habitual Mode in Tlingit (Leer 1991)

a. Habitual Perfective

b. Habitual Imperfective

Only these two seem to still exist in the language

c. Habitual Future

- Leer (1991: 417) already reports the ‘habitual future’ (17c) as ‘very rare’
- No elder I worked with used ‘habitual future’ or recognized constructed forms
- Consequently, I will set aside such forms and focus on the first two (17a,b)
Form of ‘Habitual Perfective’ Verb in Tlingit

a. (i) Conjugation prefix, if the verb is \( NA-, GA-, \) or \( GA-Conjugation \)
(ii) The prefix \( u-, \) if the verb is \( \emptyset-Conjugation \)

b. Verbal classifier is from the ‘non-I Series’ (\( a.k.a \) ‘[-I]-Classifier’)

c. The habitual suffix \( -ch. \)

a. Illustration, \( \emptyset-Conjugation \) Verb

\[
\begin{array}{ccc}
A\bar{x} & \text{éesh} & \text{̱áat} \\
a\bar{x} & \text{éesh} & \text{̱áat} & a-\emptyset-\emptyset-\text{-ch} \\
1sgPOSS & \text{father} & \text{salmon} & 3O-\emptyset\text{CONJ-3S-[-I]-eat-HAB} \\
\end{array}
\]

My father eats salmon. (SE)

b. Illustration, Non-\( \emptyset \)-Conjugation Verb Theme

\[
\begin{array}{ccc}
A\bar{x} & \text{tláa} & x’úx’ \\
A\bar{x} & \text{tláa} & x’úx’ & a-\text{-na-\emptyset-hun-ch} \\
1sgPOSS & \text{mother} & \text{book} & 3O-\text{naCONJ-3S-[-I]-sell-HAB} \\
\end{array}
\]

My mother sells books. (C)

Form of ‘Habitual Imperfective’ Verb in Tlingit

a. Regular imperfective-mode form of the verb (13)

b. Verb directly followed by the auxiliary/particle \( nooch \)

Illustration:

\[
\begin{array}{ccc}
A\bar{x} & \text{tláa} & x’úx’ \\
a\bar{x} & \text{tláa} & x’úx’ & a-\emptyset-\emptyset-hun-: \\
1sgPOSS & \text{mother} & \text{book} & 3O-3S-[-I]-sell- \text{STEM.FORM HAB} \\
\end{array}
\]

My mother sells books. (LA)

A Change in Glossing Conventions

- The morphophonological details of these inflections will largely be irrelevant to the ensuing discussion…

- Consequently, I will largely suppress these details, and will no longer give a morphological break-down of the Tlingit forms.

- Instead, verbs will simply be glossed as either perfective (PRV), imperfective (IMPRV), habitual perfective (HAB.PRV). I will also gloss \( nooch \) as HAB.
(21) **Habitual Perfective vs. Habitual Imperfective, Part 1**

- We’ll return in a moment to the semantic contrast between ‘habitual perfective’ and ‘habitual imperfective’…

- Generally speaking, in isolated sentences describing habits/dispositions, the two kinds of habitual are interchangeable (viz. (18b)-(19))

(22) **Meaning of Habitual Mode Verbs in Tlingit (Informal Description)**

Verbs bearing habitual mode receive a reading akin to the ‘habitual’ construal of imperfective verbs (15biii).

- *Neither of the other readings of imperfective verbs are available to them.*

a. **Habitual Mode Does Not Get ‘Ongoing Event’ Reading**

Scenario: Some dogs are barking outside. You want to remark on this.

(i) Yeedát gáanx’ áwé asháa wé keitl.  
now outside.at FOC IMPRV.3S.bark DEM dog

Dogs are barking outside now.  \(\text{(C)}\)^10

(ii) # Yeedát gáanx’ áwé asháa nooch wé keitl.  
now outside.at FOC IMPRV.3S.bark HAB DEM dog

Some dogs often/always/regularly bark outside.

**Judgments:** Not acceptable in this scenario. (MD)(LA)(SE)  
**Speaker Comment:** “Nooch means ‘sometimes’” (SE)

b. **Habitual Mode Does not Get ‘Ongoing State’ Reading**

(i) Aχ éesh asixán aχ tláa  
1sgPOSS father 3O.IMPRV.3S.love 1sgPOSS mother

My father loves my mother. \(\text{(SE)}\)

(ii) # Aχ éesh aχ tláa asixán nooch  
1sgPOSS father 1sgPOSS mother 3O.IMPRV.3S.love HAB

My father often/always/regularly loves my mother. \(\text{(C)}\)

**Speaker Comment:** “[Sentence (22bii)] means my dad loves my mom occasionally or intermittently.” (JM)

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10 As will be seen through other examples in this handout, NPs marked by demonstratives in Tlingit do not appear to be inherently definite. In particular, they can introduce new entities into the discourse.
(23) **Habitual Perfective vs. Habitual Imperfective (Informal Description)**

- Following Leer (1991), the exact contrast between ‘habitual perfective’ and ‘habitual imperfect’ is only really detectable in connected discourse, or with temporal adverbs
  - It will be easier to state exactly what this contrast is once we have a formal semantics for tense and aspect (Section 4)

**An Analogous Contrast in English:**

**a.** Whenever we arrive at his house, he **sings**.

*Description:* The (recurring) time of his singing is at / follows our arrival

```
<------------------ [arrival] [SINGING] -------------------------->  
```

**b.** Whenever we arrive at his house, he **is singing**.

*Description:* The (recurring) time of his singing holds throughout our arrival

```
[....... SINGING .........]  
<------------------ [arrival] -------------------------->  
```

**Illustration of the Contrast in Tlingit**

**c.** **Scenario:** Whenever we arrive at his house, he then sings for us (23a)

```
Tlákw du ḷánt wutu.ádi, yak’ éiyí shí  
always 3POSS vicinity.to PRV.1plS.walk.SUB IMPRV.3S.good.REL song
```

```
áwé du ḷ’éidáx daak usáxch.  
FOC 3POSS.mouth.from out 3O.HAB.PRV.3S.sing.prolonged
```

*Whenever we come to him, he sings our a good song.*  
(JM)

**d.** **Scenario:** Whenever we see him, he’s always in the middle of singing (23b)

```
Wutusateení, ch’a tlákw at shée nooch.  
PRV.1plS.see.SUB just always IMPRV.3S.sing HAB
```

*Whenever we see him, he’s always singing.*  
(SE)

**SPOILER ALERT:**
The use of habitual mode in sentences like (23c,d) – and the contrast between these two aspectual subtypes – is going to be a major factor in the development of our formal analysis
3.3 Expressing Habituality With Imperfective vs. Habitual Mode

(24) A Natural Hypothesis:

• Perhaps habitual mode has a ‘more specific’ meaning than imperfective mode?

• Perhaps habitual mode unambiguously expresses the ‘habitual construal’ that imperfective mode can express?

In this section, we will take a closer look at the similarities and differences between habituals and imperfectives....


a. Personal Habits: John bites his fingernails.
b. Capacities: Cheryl high jumps nearly two meters.
d. Functions: This machine makes bottles.

Carlson’s (2005, 2008) Claim: No language seems to grammatically distinguish these (As we’ll see, Tlingit is no counterexample!)

(26) Personal Habits with Imperfective Mode

a. Sh x´adas´eeḵ aḵ éesh
IMP.3S.smoke 1sgPOSS father
My father smokes (SE)
b. Ax éesh káaxwee adaná.
1sgPOSS father coffee 3O.IMPRV.3S.drink
My father drinks coffee. (MD)(JM)

(27) Personal Habits with Habitual Mode(s)

a. Ax éesh kúnáx sh x´adas´eeḵ nuch
1sgPOSS father really IMP.3S.smoke HAB
My father smoked a lot. (JM)
b. Ax éesh xáat uxaaych.
1sgPOSS father salmon 3O.HAB.PRV.3S.eat
My father eats salmon. (SE)

11 In some speakers’ dialects, the habitual auxiliary/particle is pronounced with a short vowel (i.e., nuch).
(28) Capacities with Imperfective Mode

a. Scenario: This boat is big enough to hold 20 people.

Tleįkáa lingit yei alshátxch yá yaakw twenty person 3O.IMPRV.3S.hold.REP DEM boat

This boat holds twenty people (JM)

b. Scenario: Sue is able to dance well. She doesn’t often dance, but when she does, it’s really great.

K’idéin al’eix. well IMPR.V.3S.dance

She dances well. (C)

(29) Capacities with Habitual Mode(s)

a. Scenario: [Same as (28b)]

K’idéin al’eix nooch. well IMPR.3S.dance HAB

She dances well. (C)

b. Scenario: My father doesn’t eat salmon often, but he doesn’t refuse it when offered. It’s one of the things that he will eat.

Ax éesh xáat uxáaych. 1sgPOSS father salmon 3O.HAB.PR.V.3S.eat

My father eats salmon. (C)

(30) Occupations/Duties with Imperfective Mode

a. Ax éesh we sgóonx’ áwé yéi jiné yeedát. 1sgPOSS father DEM school FOC IMPR.3S.work now

My father works at the school now. (SE)

b. Ax tláa x’úx’ ahóon. 1sgPOSS mother book 3O.IMPR.3S.sell

My mother sells books. (MD)

(31) Occupations/Duties with Habitual Mode(s)

a. Ax tláa x’úx’ ahóon nooch. 1sgPOSS mother book 3O.IMPR.3S.sell HAB

My mother sells books. (LA)

b. Ax tláa x’úx’ anahúnxch 1sgPOSS mother book 3O.HAB.PR.V.3S.sell

My mother sells books. (C)
Functions with Imperfective Mode

Wé washéen chookán alxáash.
DEM machine grass 3O.IMPRV.3S.cut
That machine [a lawnmower] cuts grass.  

Functions with Habitual Mode

Yá washéen kayaani akaxáshti nooch.
DEM machine leaf 3O.IMPRV.3S.cut.into.pieces HAB
This machine [a lawnmower] cuts leaves (of grass) into pieces.

Despite these overlaps in usage, there is one significant difference in meaning between imperfective and habitual mode…

• … one that surfaces in a variety of language that have specifically ‘habitual’ markers alongside less-marked / more general (imperfective-like) morphology

Imperfective Mode and the ‘Actualization’ of Habits

If a capacity/function/occupation is described by an imperfective mode verb, then that capacity/function/occupation need not have been ‘actualized’ yet.

a. Scenario (Based on Green 2000):
We just bought a new coffee machine. It’s never before been used. But, this is a great model of coffee machine. Everyone agrees that this model makes great coffee.

Yá yées aa washéen ḵúnáx linúktsi coffee áwé DEM new PART machine very IMPRV.3S.sweet.REL coffee FOC
al.úkx
3O.IMPRV.3S.boil.REP
This new machine boils very sweet coffee.  

b. Scenario (Based on Boneh & Doron 2008):
My dad has just signed a contract with the school. He’s officially their employee now. His first shift isn’t until next week, though.

Wé sgóon jeeyís áwé yéi jiné yeedát.
DEM school for FOC IMPRV.3S.work now
My dad works for the school now.
(35) **Habitual Mode and the ‘Actualization’ of Habits**

Capacities/functions/occupations that have *not* been ‘actualized’ yet *cannot* be described by verbs in the habitual mode.

a. **Scenario (Based on Green 2000):** (Same as (34a))

?? Yá yées aa washéen ḫúnāx linúktsi coffee áwé
DEM new PART machine very IMPRV.3S.sweet.REL coffee FOC

ool.úkch
3O.HAB.PRV.3S.boil (C)

Speaker Comment: “No. That means that you’ve used it.” (SE)

b. **Scenario (Based on Boneh & Doron 2008):** (Same as (34b))

?? Ax̱ éesh wé sgóonx’ áwé yéi jinanéich yeedát
1sgPOSS father DEM school.at FOC HAB.PRV.3S.work now (C)

(36) **Habitual and Imperfective Mode with Actualized Habits**

Capacities/functions/occupations that *have* been ‘actualized’ can be described with either the imperfective or habitual modes.

a. **Scenario:** We have an old coffee machine, which we’ve used for years. This coffee machine always makes great coffee.

(i) Yá ch’aagu aayí ch’a yeisú k’idéin
DEM ancient PART just still well

linúktsi al.úkš
IMPRV.3S.sweet.REL 3O.IMPRV.3S.boil.REP

This old one still boils sweet (coffee) well. (SE)

(ii) Yá ch’aagu aayí ch’a yeisú k’idéin
DEM ancient PART just still well

linúktsi ool.úkch
IMPRV.3S.sweet.REL 3O.HAB.PRV.3S.boil

This old one still boils sweet (coffee) well. (SE)

This same general pattern has also been reported for ‘habitual’ marking in many other, unrelated languages of the world (Carlson 2012)…
(37) **Simple Verbs vs ‘Habitual Be’ in African American English (Green 2000)**

Scenario: We’ve just bought a new printer. It’s never been used. But, it has the capacity to print a hundred pages a minute.

a. This printer **print** a hundred pages a minute.

b. # This printer **be printing** a hundred pages of minute.

(38) **Simple Verbs vs. ‘Periphrastic Habituals’ in Hebrew (Boneh & Doron 2008)**

Scenario: Dan was employed by the university as a professor. However, in no semester during his time there, were there ever enough registered students for him to teach a class.

a. Dan **limed** b-a-’universita.

   Dan teach.PAST in-the-university

   *Dan taught at the university.*

b. # Dan **haya** **melamed** b-a-’universita.

   Dan HAB.PAST taught-PTCPL in-the-university

(39) **Imperfective vs. Habitual in Czech (Filip 2018)**

Scenario: This machine has been designed to crush oranges. However, we’ve never actually used it yet.

a. Tento stroj **drtí** pomeranče

   this machine crush.IMPRV oranges

   *This machine crushes oranges.*

b. # Tento stroj **drtívá** pomeranče

   this machine crush.HAB oranges

(40) **Indicative vs. Habitual Verbs in Kallalisut (Bittner 2008)**

Scenario: There has never been any mail from Mars. However, it’s Mary’s job to handle that mail, if it ever comes in.

a. Mari Marsiminngaaniirsunik allakkirisuuuvuq.

   Mary Mars.ABL.be.COND letter-work.IND

   *Mary handles mail if it is from Mars.*

b. # Mari Marsiminngaaniirsunik allakkirisarpuq

   Mary Mars.ABL.be.COND letter-work.HAB

**Obvious Questions:**

- What is the nature of this ‘actualization’ condition on the use of Tlingit habitual mode?
- Can the explanation be extended to parallel facts in other, unrelated languages?
4. Formal Semantics of Perfective Aspect, Imperfective Aspect, and Tense


(41) Illustrative Tlingit Sentences

a. **Perfective:**
   \[\text{Ax tláach sakwnéin aawaxáa.}\]
   \(1\text{sgPOSS mother-ERG bread 3O.PRV.3S.eat}\)
   
   *My mother ate bread.*

b. **Imperfective (Eventive):**
   \[\text{Ax tláach sakwnéin axá.}\]
   \(1\text{sgPOSS mother-ERG bread 3O.IMPRV.3S.eat}\)
   
   *My mother is eating bread.* / *My mother eats bread.*

c. **Imperfective (Stative):**
   \[\text{Ax tláach ax éesh asián}\]
   \(1\text{sgPOSS mother-ERG 1sgPOSS father 3O.IMPRV.3S.love}\)
   
   *My mother loves my father.*

(42) Interpretation Relative to Time, World, and Variable Assignment

\([[\text{XP}}]^{w,t,g} = \text{Denotation of XP at world w and time t (under assignment g)}\)

- In a matrix clause, the evaluation world w and evaluation time t are the world and time that the sentence is uttered at (i.e., *speech world* and *speech time*)

(43) VPs are Predicates of Eventualities (Events and States)

a. \([[\text{VP ax tláa [VP sakwnéin [V xá ] ]]}]^{w,t,g} = \text{my mother bread eat}\)

   [\(\lambda e : \text{eat(e,w) & Agent(e,w) = my mother & } \exists y . \text{bread(y,w) & Theme(e,w) = y}\)]

   *Predicate that holds of an eventuality e iff e is an eventuality of eating, whose agent is my mother and whose theme is some bread* 

b. \([[\text{VP ax tláa [VP ax éesh [V s-şán ] ]}}]^{w,t,g} = \text{my mother my father love}\)

   [\(\lambda e : \text{love(e,w) & Exp(e,w) = my mother & Theme(e,w) = my father}\)]

   *Predicate that holds of an eventuality e iff e is an eventuality of loving, whose experiencer is my mother and whose theme is my father* 

16
(44) **Aspect Maps Predicates of Eventualities (VPs) to Predicates of Times (AspPs)**

\[
\text{AspP} < i, t > \\
\text{Asp} << \varepsilon, t >, < i, t >> \\
\text{VP} < \varepsilon, t >
\]

(45) **Semantics of Perfective Aspect**

a. Informal Semantics for Perfective (12):
   Indicates that the event described occurs at or within a particular (topical) time

b. Formal Semantics for Perfective:
   \[
   [[ \text{PRV} ]]^{\text{w.t,g}} = [ \lambda \text{t'}, \exists \text{e} . \text{P(e)} & \text{T(e)} \subseteq \text{t'} ]]
   \]
   Maps a predicate of eventualities \( \text{P} \) to a predicate of times that is true of \( \text{t'} \) iff 
   there is an event of \( \text{P} \) that occurs within \( \text{t'} \)

c. Illustration in Tlingit:
   \[
   [[ [[ \text{AspP} \text{PRV} [\text{VP } \text{ax tláa} [\text{VP sakwnéin } [\text{V xá } ] ] ] ] ]^{\text{w.t,g}} = \\
   \text{my mother bread eat}
   \]
   \[
   \lambda \text{t'}, \exists \text{e} . \text{T(e)} \subseteq \text{t'} &
   \text{eat(e,w)} & \text{Agent(e,w)} = \text{my mother} & \exists \text{y} . \text{bread(y,w)} & \text{Theme(e,w)} = \text{y}
   \]
   Predicate true of time \( \text{t'} \) if \( \text{t'} \) contains the time of an event of my mom eating bread

(46) **Tense Provides a Topical Time (Topic Time) As Argument to AspP**

\[
\text{TP} \text{ t} \\
\text{T i} \\
\text{AspP} < i, t > \\
\text{Asp} << \varepsilon, t >, < i, t >> \\
\text{VP} < \varepsilon, t >
\]

Illustration in Tlingit:

\[
[[ \text{TP} \text{T j} [[ \text{AspP} \text{PRV} [\text{VP } \text{ax tláa} [\text{VP sakwnéin } [\text{V xá } ] ] ] ] ]^{\text{w.t,g}} = \text{T iff}
\]
\[
\exists \text{e} . \text{T(e)} \subseteq \text{g(j)} & \text{eat(e,w)} & \text{Ag(e,w)} = \text{my mother} & \exists \text{y} . \text{bread(y,w)} & \text{Thm(e,w)} = \text{y}
\]

The ‘topical time’ \( \text{g(j)} \) contain the time of an event of my mother eating bread
(47) **Tense Features (PAST, FUT) Place Restrictions on the Denotation of ‘T’**

Tense features introduce special restrictions on where the denotation of the T-node
- T-nodes with PAST can only denote past times (47a)
- T-nodes with FUT can only denote future times (47b)
- T-nodes with PRES can denote any time (47c) (Sauerland 2002)

a. \[
\llbracket \llbracket [T_i \text{ PAST}] \rrbracket \rrbracket_{w,i,g} = g(i), \text{ but only if } g(i) < t \quad \text{(undefined otherwise)}
\]
b. \[
\llbracket \llbracket [T_i \text{ FUT}] \rrbracket \rrbracket_{w,i,g} = g(i), \text{ but only if } t > g(i) \quad \text{(undefined otherwise)}
\]
c. \[
\llbracket \llbracket [T_i \text{ PRES}] \rrbracket \rrbracket_{w,i,g} = g(i)
\]

(48) **Illustration of Past Perfective in Russian**

a. Russian Past Perfective (Altshuler 2014)
   Anja \textbf{ubrala} kvartiru včera
   Anna clean.PRV.PAST apartment yesterday
   *Anna cleaned up the apartment yesterday.*

b. Assumed Syntax: \[
\llbracket \llbracket \text{TP} [T_i \text{ PAST}] \rrbracket \rrbracket_{w,i,g} \quad \text{[AspP PRV} [\text{VP Anna clean apartment}]]
\]

c. Predicted Truth-Conditions \[
\llbracket \llbracket (48b) \rrbracket \rrbracket_{w,i,g} = g(i), \text{ but only if } t > g(i)
\]

\[
\exists e \cdot T(e) \subseteq g(i) & \text{clean(e,w) & Ag(e,w) = Anna & Thm(e,w) = the.apartment}
\]

(49) **Present Tense, Present Times, and ‘Maximize Presupposition’** (Sauerland 2002)

a. **Obvious Question:**
   If ‘present tense’ doesn’t place any restrictions on the location of the topical time denoted by T (47c), why can’t we use it for past or future topic times?

b. **Maximize Presupposition (Rough Version):**
   If two expressions \(\alpha\) and \(\beta\) have the same denotations, but \(\alpha\) introduces presupposition \(\varphi\) that \(\beta\) does not, and \(\varphi\) is satisfied in context \(c\), then \(\alpha\) (not \(\beta\)) must be used in context \(c\)

c. **Consequence: ‘PRES’ for Present Topic Times Only**
   - Suppose that the topic time denoted by T in context \(c\) is in the past (future)
   - Then, both \(\llbracket [T \text{ PRES}] \rrbracket\) and \(\llbracket [T \text{ PAST}] \rrbracket\) \(\llbracket [T \text{ FUT}] \rrbracket\) would be defined in \(c\)
   - However, \(\llbracket [T \text{ PAST}] \rrbracket\) \(\llbracket [T \text{ FUT}] \rrbracket\) introduces a presupposition that \(\llbracket [T \text{ PRES}] \rrbracket\) does not.
   - Therefore, by Maximize Presupposition (48b) only \(\llbracket [T \text{ PAST}] \rrbracket\) (not \(\llbracket [T \text{ FUT}] \rrbracket\)) can be used to refer to the topic time in \(c\) – and not \(\llbracket [T \text{ PRES}] \rrbracket\)
(50) **Perfective Aspect and Past-Orientation (Bennett & Partee 1978)**

a. **Question:** In Tlingit and many other languages, perfective (matrix) verbs can only describe past events. Why?

b. **Predicted Semantics for Perfective Main Clause (46):**

\[ \exists e . T(e) \subseteq g(i) \land \lfloor [VP]^{w.t.g}(e) \rfloor \]

The ‘topical time’ \( g(i) \) contains the time of a VP-event

c. **One Classic Line of Thought (Bennett & Partee 1978)**

If the topical time \( g(i) \) in (50b) were the time of speech, then (50b) would entail that the VP-event takes place within the time of speaking.

- For most events of any duration, they’re simply too long to occur within such a short (instantaneous) time! ^12
  - However, present perfectives could be used to narrate punctual events as they happen… Perhaps the following is a case of this in English?

(i) *English ‘Sportscaster Speech’ (Present Perfective?)*

Jones takes the ball. He passes to smith. Smith shoots. He scores!

(51) **Semantics of Imperfective Aspect**

a. **Informal Semantics for Imperfective (15):**

Imperfective verb forms can get one of three readings/construals:

(i) *Ongoing Event:* Event is occurring throughout the topic time

(ii) *Ongoing State:* State is holding throughout the topic time

(iii) *Habitual:* Throughout topic time, there was a habit/disposition for events of the kind described.

b. **General Formal Semantic Approach to Imperfective**

- There are accounts that successfully derive all three readings in (51a) from a single, univocal semantics for imperfective (Deo 2009, Arregui et al. 2014)

- *For purposes of simplicity alone,* I will abstract away form this, and assume two subtypes of IMPRV heads: ‘Ongoing (OG)’ and ‘Generic (HAB)’

---

^12 Furthermore, for perhaps the reasons outlined in (49), Tlingit requires ‘Future Mode’ when the eventuality takes place in the future (Cable 2017a, 2017b, to appear). Thus, plain perfective verbs in Tlingit main clauses can only be used to describe eventualities taking place in the past.
(52) Semantics of \textsc{imprv}_{\text{og}}

a. \[
[[ \textsc{imprv}_{\text{og}} ]]^{w,t,g} = \left[ \lambda P_{<s,t>} : \left[ \lambda t' : \exists e . P(e) \land t' \subseteq T(e) \right] \right]^{w,t,g}
\]
Maps a predicate of eventualities \( P \) to a predicate of times that is true of \( t' \) iff \( t' \) is contained within the time of an event of ‘\( P’\)

b. Illustration in Tlingit:

(i) Eventive Verb (41b)
\[
[[ \text{asp} \textsc{imprv}_{\text{og}} ] [\text{vp} \text{a} \text{čłáa} [\text{vp} \text{sakwnéin} [\text{v} \text{čá} ] ] ]]^{w,t,g} = \left[ \lambda t' : \exists e . t' \subseteq T(e) \land \text{eat}(e,w) \land \text{agent}(e,w) = \text{my mother} \land \exists y . \text{bread}(y,w) \land \text{theme}(e,w) = y \right]
\]
Predicate true of time \( t' \) if \( t' \) is contained in the time of an event of my mom eating bread

(ii) Stative Verb (41c)
\[
[[ \text{asp} \textsc{imprv}_{\text{og}} ] [\text{vp} \text{a} \text{čšésh} [\text{vp} \text{s-čán } ] ] ]^{w,t,g} = \left[ \lambda t' : \exists e . t' \subseteq T(e) \land \text{love}(e,w) \land \text{agent}(e,w) = \text{my mother} \land \text{theme}(e,w) = \text{my father} \right]
\]
Predicate true of time \( t' \) if \( t' \) is contained in the time of a state of my mom loving my father.

(53) Semantics of \textsc{imprv}_{\text{hab}}

a. \( \text{hhabit}(w,t) = \)
The worlds where the habits / dispositions / capacities / occupations / functions (which I will refer to generally as ‘habits’) holding at \( w, t \) are actually realized.

b. \[
[[ \textsc{imprv}_{\text{hab}} ]]^{w,t,g} = \left[ \lambda P_{<s,t>} : \left[ \lambda t' : \forall w' \in \text{hhabit}(w,t') \cdot \exists e . P^*(w')(e) \land t' \subseteq T(e) \right] \right]
\]
Maps a property of eventualities \( P \) to a predicate of times that is true of \( t' \) iff in all the worlds \( w' \) where the ‘habits’ holding at \( w, t' \) are realized, \( t' \) is contained within the time of a plurality of events of ‘\( P’\)

\footnote{It is broadly recognized that both the ‘ongoing event’ and ‘ongoing state’ readings of imperfective aspect also involve an important modal component (Dowty 1979, Deo 2009, Arregui \textit{et al.} 2014). Again, for purposes of simplicity, I abstract away from that additional complication here.}
Illustration of IMPRV\textsubscript{HAB} in Tlingit

\[
[ [ \text{AspP IMPRV\textsubscript{HAB}} [\text{VP ax tláa [VP sakwnéin [v xá ] ] } ]] ]^{w,t,g} = 14
\]

\[
[ \lambda t' : \forall w' \in \text{HABIT}(w,t'). \exists e. t' \subseteq T(e). \text{eat(e,w')} & \text{Agent(e,w')} = \text{my mother} & \exists y . \text{bread(y,w')} & \text{Theme(e,w')} = y ]
\]

Predicate true of time \( t' \) if \textit{in all the worlds where the habits at \( t' \) are realized, \( t' \) is contained within the times of a plurality of events of my mom eating bread.}

**Key Prediction of the Semantics in (53)-(54)**

- Note that the \textit{actual} (evaluation) world \( w \) need not be a world where the ‘habits’ holding at (\( w,t' \)) are realized.
  - After all ‘habits’ in this sense includes things like my assigned duties, and the actual world might be one where I needn’t actually carry those out.

- Thus, the predicate in (54) will not require that any events of the kind described by the VP occur in the actual world (34).

**Basic Analysis of Generic Sentences**

- The exact syntax/semantics of generic sentences is a highly complex issue, and will not be of key importance to the arguments here.

- However, I will follow many prior authors and assume that in such cases, the habitual operator (IMPRV\textsubscript{HAB}) is unselectively binding the indefinite subject (Carlson 1989, Wilkinson 1991, Krifka \textit{et al.} 1995, Greenberg 2007)

\[
\text{LF of Generic Sentence in Tlingit (16b):}
\]

\[
[ [ \text{AspP IMPRV\textsubscript{HAB}} [\text{VP keitl1 [VP a-sha ] } ]] ]^{w,t,g} =
\]

\[
[ \lambda t' : \forall <w', x> . w \in \text{HABIT}(w,t') & \text{dog(x,w',t')} . \exists e. t' \subseteq T(e). \text{bark(e,w')} & \text{Agent(e,w)} = x ]
\]

In all the worlds \( w' \) where the habits at \( t' \) are realized, \textit{and all the entities \( x \) such that \( x \) is a dog in \( w' \) at \( t' \)}, there is a plurality of events of \( x \) barking that contain \( t' \)

\[14\] Although the extension of a VP is by assumption of type \(<\varepsilon,t>, I assume that it can combine with \([\text{IMPRV}_{\text{HAB}}]\) as defined in (53) via Heim & Kratzer’s (1998) operation of ‘Intensional Function Application’.
5. The Aspectual Semantics of Simple Verbs in English

(57) Key (Unoriginal) Claim:
Simple verbs in English can realize either PRV or IMPRV aspect (Deo 2015, et alia)

(58) The Interpretations of Simple Past Verbs in English

a. Past Perfective: When we were standing outside today, Tom smoked.
b. Past Habitual: When he was married, Tom smoked.
c. Past Ongoing State: When they were married, Tom loved Bill.

(59) Progressive and ‘Ongoing Events’

• (Past) ongoing events cannot be described with (past) simple verbs in English.
• Instead, the (past) progressive construction must be used.

Past Ongoing Event: a. When that happened, Tom was smoking.
                 b. # When that happened, Tom smoked. (≠ (59a))

(60) Formal Analysis, Part 1: Phonologically Null Aspects

• In English, the heads [PRV], [IMPRV\textsubscript{OG}], and [IMPRV\textsubscript{HAB}] are phonologically null.
• Thus, the sentences in (58a,b,c) can get the following LFs and truth-conditions

a.  (i) LF of (58a): [ PAST\textsubscript{i} [ PRV [ Tom smoke ] ] ]
    (ii) Truth-Conditions: Only defined if g(i) < t. When defined, T \textit{iff}
                     \exists e. T(e) \subseteq g(i) & smoke(e,w) & Ag(e,w) = Tom

b.  (i) LF of (58b): [ PAST\textsubscript{i} [ IMPRV\textsubscript{HAB} [ Tom smoke ] ] ]
    (ii) Truth-Conditions: Only defined if g(i) < t. When defined, T \textit{iff}
                    \forall w' \in HABIT(w, g(i)) . \exists e. g(i) \subseteq T(e) . *smoke(e,w') & *Ag(e,w') = Tom

c.  (i) LF of (58c): [ PAST\textsubscript{i} [ IMPRV\textsubscript{OG} [ Tom love Bill ] ] ]
    (ii) Truth-Conditions: Only defined if g(i) < t. When defined, T \textit{iff}
                 \exists e. g(i) \subseteq T(e) & love(e,w) & Ag(e,w) = Tom & Thm(e,w) = Bill
Formal Analysis, Part 2: Blocking by ‘PROG’

a. The English ‘PROG’ Head:
   English has the Asp head, PROG, which is semantically identical to IMPRV\textsubscript{OG}, except that it presupposes the VP is eventive
   
   \[
   [[ \text{PROG} ]]^{w,t,g} = [ \lambda P \in \mathcal{E}_P : P \text{ is eventive} \cdot [ \lambda t' : \exists e . P(e) \& t' \subseteq T(e) ] ]
   \]

b. Illustration:
   (i) Sentence: Tom was smoking.
   (ii) LF: [ PAST\textsubscript{i} [ PROG [ Tom smoke ] ] ]
   (iii) Semantics: Only defined if \( g(i) < t \) \text{ and } [[Tom smoke]]^{w,t,g} \text{ is eventive}
   When defined, \( T \) iff:
   \[ \exists e. g(i) \subseteq T(e) \& \text{smoke}(e,w) \& \text{Ag}(e,w) = \text{Tom} \]

c. ‘PROG’ Blocks ‘IMPRV\textsubscript{OG}’ With Eventive VPs (Deo 2015)
   • The two TPs in (i) have the same denotation, except that the one with PROG carries a presupposition that the one with IMPRV\textsubscript{OG} does not.

   (i) 1. [ PAST\textsubscript{i} [ IMPRV\textsubscript{OG} [ Tom smoke ] ] ]
       2. [ PAST\textsubscript{i} [ PROG [ Tom smoke ] ] ]

   • Thus, by Maximize Presupposition (49b), when the presupposition of PROG is satisfied – i.e., when the VP is eventive – only PROG can be used

   • Consequently, English simple Vs never receive ‘ongoing event’ readings.

The ideas laid out above easily extend to the case of simple presents in English...

The (Most Common) Interpretations of Simple Present Verbs in English

a. Present Habitual: Tom \textit{smokes}.

b. Present Ongoing State: Tom \textit{loves} Bill.

c. Present Ongoing Events Described with Progressive, Not Simple present

   (i) Tom \textit{is smoking}.
   (ii) Tom \textit{smokes}. (\( \neq (i) \))
Formal Analysis of Simple Presents in English

a. (i) LF of (62a): [ PRESi [ IMPRVHAB [ Tom smoke ] ] ]
   (ii) Truth-Conditions:
   \[ \forall w' \in \text{HABIT}(w, g(i)). \exists e. g(i) \subseteq T(e). *\text{smoke}(e, w') \land *\text{Ag}(e, w') = \text{Tom} \]
   - Since PRESi is referential (unbound), Maximize Presupposition (49b) requires that g(i) is the matrix evaluation time / time of utterance (49c)

b. (i) LF of (62b): [ PRESi [ IMPRVOG [ Tom love Bill ] ] ]
   (ii) Truth-Conditions:
   \[ \exists e. g(i) \subseteq T(e) \land \text{love}(e, w) \land \text{Ag}(e, w) = \text{Tom} \land \text{Thm}(e, w) = \text{Bill} \]
   - Since PRESi is referential (unbound), Maximize Presupposition (49b) requires that g(i) is the matrix evaluation time / time of utterance (49c)

c. Blocking by ‘PROG’
For the reasons explained in (61), ‘IMPRVOG’ in English cannot be used with eventive VPs. Rather, ‘PROG’ must be used to get the ‘ongoing event’ reading.
   (i) LF of (62ci): [ PRESi [ PROG [ Tom smoke ] ] ]
   (ii) Truth-Conditions:
   \[ \exists e. g(i) \subseteq T(e) \land \text{smoke}(e, w) \land \text{Ag}(e, w) = \text{Tom} \]
   - Since PRESi is referential (unbound), Maximize Presupposition (49b) requires that g(i) is the matrix evaluation time / time of utterance (49c)

Present Perfectives in English, Part 1

For the reasons explained earlier (50), an LF like (64a) – where a present tense is referential – will generally be anomalous, since it will require the event in question to take place within the time of speech (g(i))

a. Present Perfective LF: [ PRESi [ PRV [ Tom smoke ] ] ]

b. Truth-Conditions:
   \[ \exists e. T(e) \subseteq g(i) \land \text{smoke}(e, w) \land \text{Ag}(e, w) = \text{Tom} \]
   - Since PRESi is referential (unbound), Maximize Presupposition (49b) requires that g(i) is the matrix evaluation time / time of utterance (49c)
(65) **Present Perfectives in English, Part 2**

However, in cases where a speaker is reporting the occurrence of events as they happen, such uses of simple present should be possible.

- This likely explains the use of simple presents in announcer speech like in (65a) (Bennett & Partee 1978)
  a. **Sentence:** The Giants win!
  b. **LF:** \([ \text{PRES}_i [ \text{PRV} [ \text{The Giants win} ] ] ]\)
  c. **Truth-Conditions:** \( \exists e. T(e) \subseteq g(i) \& \text{win}(e,w) \& \text{Ag}(e,w) = \text{The Giants} \)

- Since \(\text{PRES}_i\) is referential (unbound), Maximize Presupposition (49b) requires that \(g(i)\) is the matrix evaluation time / time of utterance (49c)

- Thus, the Giants winning occurs immediately, at the time of speech.

In the next subsection, we will some additional cases where it appears that Perfective Aspect co-occurs with Present Tense in English...

- Such cases will have important implications for other sentences where simple presents seems to receive ‘habitual’ interpretations...

6. **English Simple Verbs and Quantificational Temporal Adverbs**

(66) a. **Question:** What accounts for the use of simple present in sentences like these:

(i) Dave always **buys** a coffee.

b. **Natural Answer:**

- Sentences like (66ai) seem to be describing ‘habits’.
- So, maybe the simple V here is complement to \(\text{IMPRV}_{\text{HAB}}\)

c. **Counterproposal:**

Contrary to the ‘natural answer’ in (66b), simple Vs in sentences like (66a) are actually realizing (present) \(\text{PRV}\)
6.1 Aspectual Ambiguity of Simple English Vs with Quantificational Temporal Adverbs

(67) Background Ingredient: Presupposition Accommodation Under Binding

When a quantificational expression binds a presupposition trigger (such as a pronoun), that presupposition can be ‘locally accommodated’, forming an additional restrictor on the quantifier (Sudo 2012).

Illustration: Possessives in English

a. \([ [\text{their, sister }]^{w,t,g}] \) is only defined if \(g(i)\) has a sister
when defined, = the unique \(y\) such that \(y\) is sister to \(g(i)\)

b. \([ [\text{Everybody loves their, sister }]^{w,t,g} = T\) iff

\(\forall x. x\) is a person & \(x\) has a sister \(\rightarrow\) \(x\) loves the unique \(y\) such that \(y\) is sister to \(x\)

‘Everybody who has a sister loves that sister’

(68) Quantificational Adverbs, Past Tense and Perfective Aspect

- The intuitive meaning of sentence (68a) can be paraphrased as in (68b).
- We capture this with the LF in (68c), where ‘every Christmas’ binds the PAST tense and the VP is sister to perfective aspect.

- The restriction to past Christmases is a result of the presupposition of the past tense being locally accommodated to ‘every Christmas’ (67)

a. Sentence: Every Christmas, Tom baked a pie.

b. Paraphrase: Within every span of time \(t’\) covering a Christmas in the past, there is an event of Tom baking a pie.  

\(\forall t’. \) Christmas(\(t’\)) & \(t’ < t \) \(\exists e. T(e) \subseteq t’ \) & bake(e,w) & Ag(e,w) = Tom & \(\exists y. cake(y,w) \) & Thm(e,w) = y

\(\text{Every t’ such that t’ covers a Christmas and t’ precedes t contains the time of an event of Tom baking a cake}\)

---

15 Of course, the intuitive meaning of (68ai) also does not quantify over all past Christmases, but only ‘relevant’ ones where Tom is alive, has knowledge of baking, etc. For simplicity’s sake, I will put aside here this further contextual restriction on ‘Christmas’. 

26
The claim that there is perfective aspect in (68a) is supported by there being contrasting cases where intuitively we would want the (covert) aspect to be imperfective...

(69) Quantificational Adverbs, Past Tense and Imperfective Aspect

- The intuitive meaning of sentence (69a) can be paraphrased as in (69b).
- We capture this with the LF in (69c), where ‘every Christmas’ binds the PAST tense and the VP is sister to imperfective (IMPRV_HAB) aspect.

  - (Also, qua generic, the IMPRV unselectively binds ‘complaints’….)

a. Sentence: Every Christmas, Tom handled (any) complaints.

b. Paraphrase: Within every span of time t’ covering a Christmas in the past, it was Tom’s job to handle any complaints, if they arose. Such complaints need not have actually arisen.

c. \[
\begin{align*}
\text{TP[Every Christmas]} & \text{1} \\
\text{PAST} & \text{1} \\
\text{AspP IMPRV_HAB} & \text{2} \\
\text{VP Tom handle [complaints]} & \text{2} \\
\end{align*}
\]

b. \[
\begin{align*}
\text{[(69c)]}^{w,t,g} = T & \text{ iff } \\
\forall t’ . \text{Christmas}(t’) & \land t’ < t \\
\forall <w’, x> . w \in \text{HABIT}(w, t’) & \land \text{complaint}(x, w’, t’). \\
\exists e. t’ \subseteq T(e) . \text{*handle}(e, w’) & \land \text{*Ag}(e, w) = \text{Tom} \land \text{*Thm}(e, w) = x
\end{align*}
\]

Every t’ that covers a Christmas and precedes t is such that In all the worlds w’ where the habits at t’ are realized, For all x such that x is a complaint in w’ at t’, Tom handles x

Note: Given the modal quantification introduced by IMPRV_HAB, the truth-conditions in (69d) do not entail that any complaints ever actually occurred.

(70) Interim Summary:

When a quantificational temporal adverb binds a past tense, a simple (past) V allows for either a perfective or a (generic / habitual) imperfective interpretation.

(71) Crucial Claim For What Follows:

This same kind of aspectual ambiguity occurs when a quantificational adverb binds a present tense!
(72) Quantificational Adverbs, Present Tense and Perfective Aspect

- The intuitive meaning of sentence (72a) can be paraphrased as in (72b).
- We capture this with the LF in (72c), where ‘every Christmas’ binds the PRES tense and the VP is sister to perfective aspect.
  
  - Since PRES carries no presuppositions (47c), there is no temporal restriction on ‘Christmas’, and so quantification ranges over past, present, future Xmases

  a. **Sentence:** Every Christmas, Tom bakes a pie.
  
  b. **Paraphrase:** Within every span of time t’ covering a Christmas (**past, present, or future**), there is an event of Tom baking a pie.

  c. \[[TP [ Every Christmas ]_1 [TP PRES]_1 [AspP PRV [VP Tom bake a pie ]] … ]\]

  d. \[[ (72c) ]]_{w,t,g} = T \quad iff

  \[ \forall t’. \text{Christmas}(t’) \rightarrow \exists e. \text{T}(e) \subseteq t’ \& \text{bake}(e,w) \& \text{Ag}(e,w) = \text{Tom} \& \exists y . \text{cake}(y,w) \& \text{Thm}(e,w) = y \]

  *Every t’ such that t’ covers a Christmas (past, present, or future) contains the time of an event of Tom baking a cake*

(73) Note on the Use of Present in (72a)

a. **Question:** Why is [PRES] licensed in (72a) even though the times it ranges over include both past and future times?

b. **Answer** (Sauerland 2002):

- If [PRES] in (72c) were replaced with either [PAST] or [FUT], the resulting sentence would not be truth-conditionally equivalent to (72c).

- As we’ve seen, the presuppositions of [PAST] (and [FUT]) would be locally accommodated, leading to an additional restriction on ‘every Christmas’.

- Therefore, Maximize Presupposition (49b) would not militate against using [PRES] in such sentences.
  - In fact, only [PRES] could be used to express the meaning in (72d)

And, again, we see that there is an intuitive contrast between cases like (72a) and ones where we’d want the implicit aspect to (generic / habitual) IMPRV...
(74) **Quantificational Adverbs, Present Tense and Imperfective Aspect**

- The intuitive meaning of sentence (74a) can be paraphrased as in (74b).
- We capture this with the LF in (74c), where ‘every Christmas’ binds the PRES tense and the VP is sister to **imperfective** (IMPRV\textsubscript{HAB}) aspect.

a. **Sentence:** Every Christmas, Tom handles (any) complaints.

b. **Paraphrase:** Within every span of time t’ covering a Christmas (past, present or future), it is Tom’s job to handle any complaints, if they arise. Such complaints need not have actually arisen.

c. \[ \text{[TP [Every Christmas]_1 [TP PRES\textsubscript{1}

\texttt{Aspp IMPRV\textsubscript{HAB}2 [VP Tom handle [complaints]_2 ] .... ]} \]

d. \[ \text{[[ (74c) ]]^{w,t,g} = T \iff

\forall t’. \text{Christmas}(t’) \rightarrow

\forall <w’, x>. w \in \text{HABIT}(w, t’) \& \text{complaint}(x, w’, t’).

\exists e. t’ \subseteq T(e). *\text{handle}(e, w’) \& *\text{Ag}(e, w) = \text{Tom} \& *\text{Thm}(e, w) = x

\]}

*Every t’ that covers a Christmas and (past, present or future) is such that In all the worlds w’ where the habits at t’ are realized, For all x such that x is a complaint in w’ at t’, Tom handles x*

(75) **Major Conclusion**

- When a quantificational temporal adverb binds a present tense, a simple (present) V allows for either a **perfective** or a (generic / habitual) **imperfective** interpretation.
- Thus, one other environment where English allows for present perfectives are cases where the (present) tense is bound by a quantificational temporal adverb!

(76) **Additional Supporting Evidence: Ambiguity of Bare Plurals**
The sentence in (76a) is ambiguous, and allows for either reading in (76b).

a. Every December, UMass students drink at Packards.

b. (i) **Existential, Episodic (Perfective) Reading:**
Every December, there are UMass students who go drinking at Packards.

(ii) **Generic (Imperfective) Reading:**
Every December, it is traditional for UMass students to drink at Packards.
(77) **Predicting the Ambiguity of (76) Through the Aspectual Ambiguity of the Verb**

a. LF for the Existential Reading:
   - No aspectual head ‘unselectively binds’ the bare plural *UMass students*
   - Therefore, the bare plural gets an existential reading (Krifka et al. 1995)

\[
[TP [ Every December ]_1 [TP PRES_1 [AspP PRV [VP UMass students drink at P. ] … ]]
\]

b. \[
[[ (77a) ]]^{w,t,g} = T \quad \text{iff} \\
\forall t'. \text{December}(t') \rightarrow \exists e. T(e) \subseteq t' & \text{drink}(e,w) & \exists x . \text{UMass.student}(x,w) & \text{Ag}(e,w) = x & \text{Loc}(e,w) = \text{Packards}
\]

*Every December contains a drinking event by some UMass students at Packards.*

c. LF for the Generic Reading:
   - The aspectual head ‘IMPRV\text{HAB}’ unselectively binds *UMass students*
   - Therefore, it gets a generic, ‘quasi-universal’ construal (Krifka et al. 1995)

\[
[TP [ Every December ]_1 [TP PRES_1 [AspP IMPRV\text{HAB}2 [VP [UMass students]_2 drink at Packards ] … ]]
\]

d. \[
[[ (77c) ]]^{w,t,g} = T \quad \text{iff} \\
\forall t'. \text{December}(t') \rightarrow \\
\forall <w', x>. w \in \text{HABIT}(w, t') & \text{UMass.Student}(x,w'). \\
\exists e. t' \subseteq T(e) . *\text{handle}(e,w') & *\text{Ag}(e,w) = \text{Tom} & *\text{Thm}(e,w) = x
\]

*Every December t’ is such that in all the worlds where the habits at t’ are realized, all the UMass students in w’ drink at Packards in w’.*

(78) **Return to Our Opening Question: Why Simple Present in (66a)?**

The intuitive meaning of sentence (66a) is nicely captured under the LF in (78c), whereby the VP is complement to *perfective* aspect.

a. **Sentence:** Tom always **buys** coffee.

b. **LF:**
   
   [ Always\text{C}1 [ PRES_1 [ PRV [ Tom buy coffee ] … ]]


c. **Truth-Conditions:**
   
   \[
   \forall t'. C(t') \rightarrow \exists e. T(e) \subseteq t' & \text{buy}(e,w) & \text{Ag}(e,w) = \text{Tom} & \\
   \exists y . \text{coffee}(w) & \text{Thm}(e,w) = y
   \]

*For all times t’ (that are contextually relevant), t’ contains an event of Tom buying coffee.*
6.2 Some Further Consequences of the English Analysis (Towards the Tlingit Habitual)

(79) Perfective vs. Progressive in the Scope of Temporal Quantifiers
Our account nicely captures the intuitive contrast between the sentences in (23)

a. Whenever we arrive at his house, Tom is singing.
Paraphrase: The (recurring) time of Tom’s singing holds throughout our arrival

b. Whenever we arrive at his house, Tom sings.
Paraphrase: The (recurring) time of Tom’s singing is at / follows our arrival

(80) Analysis of Sentence (79a)

a. LF: [ [ whenever we arrive at his house ]₁ [ PRES₁ [ PROG [ Tom sing ] … ] ]

b. Truth-Conditions:
∀t’. ∃e. T(e) = t’ & arrive(e,w) & Ag(e,w) = us & Loc(e,w) = Tom’s house →
∃e’. t’ ⊆ T(e’) & sing(e’,w) & Ag(e’,w) = Tom

Every time t’ that is the time of an event our arriving at Tom’s house
is contained within the time of an event of Tom’s singing.

(81) Analysis of Sentence (79b)

a. LF: [ [ whenever we arrive at his house ]₁ [ PRES₁ [ PRV [ Tom sing ] … ] ]

b. Truth-Conditions:
∀t’. ∃e. T(e) = t’ & arrive(e,w) & Ag(e,w) = us & Loc(e,w) = Tom’s house →
∃e’. T(e) ⊆ t’ & sing(e’,w) & Ag(e’,w) = Tom

Every time t’ that is the time of an event our arriving at Tom’s house
contains (coincides with) the time of an event of Tom’s singing.

(82) Important Note Regarding Predicted Truth-Conditions for (79b)

• Our predicted truth-conditions in (81b) state that time of our arrival at Tom’s house
includes the times of an event of his singing…

• This is wrong, however! Intuitively, (79b) says that every time of our arrival is
‘immediately followed’ by an event of Tom singing…

• This is a well-known, independent problem for our ‘Neo-Reichenbachian’ semantics
for [PRV] (Partee 1984, Kamp et al. 2011)
  o In certain environments, [PRV] seems to place the ‘event time’ just after the
    ‘Topic Time’, rather than within it…
(83) **Additional Key Prediction: Actuality Entailments!**

Intuitively, the English sentences in (79a,b) *entail* that there are actually events of Tom singing. This entailment follows under our semantics in (80) and (81)

- The aspectual heads in (80)/(81) are [PRV] and [PROG], which introduce no modal quantification…
- Thus, the resulting truth-conditions require at the times quantified over, there are VP-events holding at the actual world (matrix evaluation world)

(84) **Interactions Between Temporal Quantifiers and Statives**

a. **Observation:**
The sentence in (84b) is ‘anomalous’, in as much as it implies that my dad doesn’t love my mom at any other times.

b. **Sentence:**   **Every summer**, my dad loves my mom.

c. **Rough Analysis:**
- (84b) is predicted to have the LF and truth-conditions in (i)-(ii) below.
- A salient, stronger pragmatic alternative is the sentence in (84d).
- Thus, asserting (84b) implicates that (84d) is false, resulting in ‘anomaly’

(i)  

(ii) \[ \forall t'. \text{summer}(t') \rightarrow \exists e. t' \subseteq T(e) & \text{love}(e,w) & \text{Ag}(e,w) = \text{my.dad} & \text{Thm}(e,w) = \text{my.mom} \]

d. **Stronger Pragmatic Alternative:**   **My dad always** loves my mom.

(i)  

(ii) \[ \forall t'. \text{C}(t') \rightarrow \exists e. t' \subseteq T(e) & \text{love}(e,w) & \text{Ag}(e,w) = \text{my.dad} & \text{Thm}(e,w) = \text{my.mom} \]

e. **Further Observation**
As long as the state in question is one that does intuitively hold ‘intermittently’, modification by such temporal adverbs is acceptable, as predicted by the account above.

(i)  **Sentence:**   **Every summer**, the mosquitoes are numerous.

(ii) **Non-Anomalous Implicature:** They aren’t numerous at other times.
(85) **Foreshadowing…**  
The facts that we’ve just captured for overtly, temporally quantified sentences of English are *strikingly similar* to the key facts observed for ‘Habitual Mode’ sentences in Tlingit!  
(cf. (22b), (23c,d), (35)-(36))

(86) **An Additional Key Ingredient: Anaphora to Discourse-Given Temporal Quantifiers**

a. **Question and Answer Discourse:**
   (i) What does Tom do every Christmas?
   (ii) 1. He bakes a pie.
        2. He also handles complaints.

b. **Connected Narrative:**
   (i) Every Christmas, Tom bakes a pie.
   (ii) He also handles (any) complaints.

c. **Key Observation**
   Despite their not containing any overt temporal quantifier, the sentences in (86aii) and (86bii) are interpreted as follows:
   
   (i) *Interpretation of (86aii.1):*
   \[ \forall t' . \text{Christmas}(t') \rightarrow \exists e. T(e) \subseteq t' \land \text{bake}(e,w) \land \text{Ag}(e,w) = \text{Tom} \land \exists y . \text{pie}(y,w) \land \text{Thm}(e,w) = y \]
   
   *Every Christmas contains an event of Tom baking a pie.*
   
   (ii) *Interpretation of (86aii.2)/(86bii):*
   \[ \forall t' . \text{Christmas}(t') \rightarrow \forall <w',x> . w \in \text{HABIT}(w, t') \land \text{complaint}(x,w',t') . \exists e. t' \subseteq T(e) . \text{*handle}(e,w') \land *\text{Ag}(e,w) = \text{Tom} \land *\text{Thm}(e,w) = x \]

   *At every Christmas t’, in the worlds w’ where the habits at t’ are realized, Tom handles any complaints at w’.*

d. **Key Conclusion:**
   English possess *some means* by which sentences without an overt temporal quantifier are understood as lying within the scope of such a quantifier.

(87) **Crude ‘Kluge’ for Handling the Anaphora in (86)**

For the purposes of our discussion, it will be sufficient to just suppose that there is some kind of null anaphora to a quantificational adverb in the sentences of (86a,b)

a. \[ \text{ADV}_1 [ \text{PRES}_1 [ \text{PRV} [ \text{He bake a pie} ] ] ] \]

b. \[ \text{ADV}_1 [ \text{PRES}_1 [ \text{IMPRV}_{\text{HAB}}_2 [ \text{He handle complaints}_2 ] ] ] \]
(88) **Major Consequence: The Ambiguity of ‘Habitual’ Simple Presents in English**

The simple present English sentence in (1a) / (88a) is potentially syntactically/semantically ambiguous, even when we understand it to describe a ‘habit’

- It can receive the ‘generic’ LF in (88b), where the VP is sister to [IMPRV\textsubscript{HAB}]
- It can also receive ‘quantificational’ LF in (88c), where the VP is sister to PRV, but the [PRES] tense is bound by an implicit quantifier.

a. My father **eats** salmon.

b. ‘Generic’ Imperfective LF for (88a)

(i) \textit{LF:} \[ \text{PRES}_i [ \text{IMPRV}_{\text{HAB}} [ \text{my eather eat salmon} ] ] \]

(ii) \textit{Truth-Conditions:}

\[ \forall w' \in \text{HABIT}(w, g(i)) \cdot \exists e. g(i) \subseteq T(e) \& *\text{eat}(e, w') \& *\text{Ag}(e, w') = \text{my.father} \& \exists y . \text{salmon}(y, w') \& \text{Thm}(e, w') = y \]

- Since PRES\textsubscript{i} is referential (unbound), Maximize Presupposition (49b) requires that g(i) is the matrix evaluation time / time of utterance (49c)

c. Quantificational LF for (88a)

(i) \textit{LF:} \[ \text{ADV}_i [ \text{PRES}_i [ \text{PRV} [ \text{my eather eat salmon} ] ] ] \]

(ii) \textit{Truth-Conditions:}

\[ \forall / \exists t' . \varphi(t') : \exists e. T(e) \subseteq t' \& \text{eat}(e,w) \& \text{Ag}(e,w) = \text{my.father} \& \exists y . \text{salmon}(y,w) \& \text{Thm}(e,w) = y \]
7. **Tlingit Habitual Mode as Quantificationally Dependent Tense**

In Section 4, I presented a semantics for the Perfective and Imperfective Modes of Tlingit…

*But what about the Habitual Modes (Habitual (Im)Perfective)?*

(89) **Observation: Habitual Aspect and Quantificational Adverbs, Part 1**

One common syntactic environment where verbs in Habitual Mode are found is within the scope of various temporal quantificational expressions.

“[There is a] pronounced preference for Habitual forms in the presence of a temporal adverbial which imposes a condition on the instances of the habitual occurrence.” [Leer 1991: 405]

a. Wáa nganeen sáwé yéi yandus kéich “I káani áwé…”
sometimes 3O.HAB.PRV.IndefS.tell 2sgPOSS brother-in-law COP

*Sometimes they would say to him, “it was your brother in law…”*

(Dauenhauer & Dauenhauer 1990: 294, line 176)

b. Wáa nganein sáwé yá Ch’al’geiyita.aan áa yéi haa nateech.
sometimes DEM Ch’al’geiyita.aan there HAB.PRV.1plS.dwell

*Once in a while, we lived there in Ch’al’geiyita.aan.*

(Dauenhauer & Dauenhauer 1987: 84, line 41)

c. Tlákw woosh eetéex yaa gasxitch áx’
always RECIP after HAB.PRV.breed there

*They (always) multiply one generation after another over there.*

(Dauenhauer & Dauenhauer 1987: 262, line 38)

d. Tlákw du ḥánt wutu.ádi, yak’éiyi shí
always 3POSS vicinity.to PRV.1plS.walk.SUB IMPRV.3S.good.REL song

áwé du x’édáx daak us.áxch.
FOC 3POSS mouth.from out 3O.HAB.PRV.3S.sing.prolonged

*Whenever we come to him, he sings out a good song.* (JM)

e. Tlákw aku.eikw nooch du yéi jinéiyi yéi adaaneiyí .
always IMPRV.3S.whistle HAB 3.POSS work 3O.IMPRV.3S.do.SU

*He always whistles while he’s doing his work.* (JM)

f. Yóo dikée kei xtu.áadin áwé, s du yeegáá áa xtookéech.
DEM above up CONT.1plS.go FOC PL.3O.for there HAB.PRV.1plS.sit

*Whenever we had gotten way up high, we sat there waiting for them.*

(Leer 1991: 407)
Observation: Habitual Aspect and Quantificational Adverbs, Part 2

It is also common to find cases where a Habitual Mode verb appears without an overt temporal quantifier, but the (native speaker) translator inserts an understood quantifier into the English translation.

a. Yá áæ éesh hás has dutlakw nooch, DEM 1sgPOSS father.PL PL.3O.IMPRV.IndefS.narrate HAB

The story of my fathers is always told
(Dauenhauer & Dauenhauer 1987: 66, line 91)

b. Áwé tle yéi ̱xwajée nuch wé taan áwé
FOC then 3O.IMPRV.1sgS.think HAB DEM sealion FOC

aaæ has jiwtñúk wé atñá sákw.
3O.for PL.PRV.3O.want DEM food for

I sometimes think it was the sea lions they wanted to kill for food.
(Dauenhauer & Dauenhauer 1987: 138, line 9)

Proposal: Habitual Mode is a Quantificationally Dependent Tense

Habitual Mode in Tlingit is the realization of the T-node when it is bound by a quantificational adverb.

a. Rough Spell-Out Rules

(i) Habitual Perfective

\[ T_i \leftrightarrow / -ch / \quad / [ \text{PRV} ] \] and \( T_i \) is locally bound by a quantifier

(ii) Habitual Imperfective

\[ T_i \leftrightarrow / nooch / \quad / [ \text{IMPRV} ] \] and \( T_i \) is locally bound by a quantifier

b. Syntactic Consequences

(i) General LF of a Habitual Perfective

\[ [TP \text{QUANTIFIER}_i [TP T_i [\text{AspP PRV [VP \cdots] ]]]] \]

(ii) General LF of a Habitual Imperfective

\[ [TP \text{QUANTIFIER}_i [TP T_i [\text{AspP IMPRV [VP \cdots] ]]]] \]
Licensing of Habitual Mode by ‘Implicit’ Quantifiers

a. Obvious Question:
What about the many examples where there is a Tlingit verb in Habitual Mode, but no overt quantificational temporal adverb?

b. Proposal: Implicit Temporal Quantifiers

- In such sentences, Habitual Mode is licensed by an understood/implicit temporal quantifier, one that is sometimes expressed overtly by native speaker translators (90).
- Under our ‘crude’ implementation of such implicit quantifiers (87), we can take them to simply involve (null) pronominal anaphora to such an expression.

(i) Sentence: Aŋ̱ éesh ń̓áat u̱x̱áaych.  
1sgPOSS father salmon 3O.HAB.PRV.3S.eat  
My father eats salmon. (SE)

(ii) LF: [TP ADVı [TP Tı [Asp P [PRV [my father eat salmon]]]]]

Accurate Morphosyntactic Predictions

- ‘Habitual Mode’ should be able to co-occur with aspectual heads ([PRV], [IMPRV])
- ‘Habitual Mode’ should appear to take aspect within its scope
- ‘Habitual Mode’ should be realized as either a suffix or a post-verbal particle
  - The only other realization of [T] in Tlingit is an (optional) past tense marker (Cable 2017b)
  - This marker also surfaces as either a suffix or a post-verbal particle

Accurate Semantic Prediction: Habitual Imperfective vs. Habitual Perfective

- Under this analysis, ‘Habitual Perfective’ sentences in Tlingit have the same syntax as English sentences like (94a).
- Under this analysis, ‘Habitual Imperfective’ sentences in Tlingit have the same syntax as English sentences like (94b)
- We therefore accurately predict their semantic similarity (23)

a. ‘Habitual Perfective’ Whenever we arrive at his house, Tom sings
b. ‘Habitual Imperfective’ Whenever we arrive at his house, Tom is singing
The Semantics of Habitual Perfective vs. Habitual Imperfective

a. Scenario: Whenever we arrive at his house, he then sings for us (94a)

\[
\begin{align*}
\text{Tlák\ wu xánt} & \quad \text{wutu\ádi,} & \quad \text{yak\'éiyi} & \quad \text{shí} \\
\text{always 3POSS vicinity.to} & \quad \text{PRV.1plS.walk.SUB} & \quad \text{IMPRV.3S.good.REL song}
\end{align*}
\]

\[
\begin{align*}
\text{áwè du} & \quad \text{x\’ídax daak} & \quad \text{us\ách.} \\
\text{FOC 3POSS mouth.from out} & \quad \text{3O.HAB.PRV.3S.sing.prolonged}
\end{align*}
\]

Whenever we arrive at his house, he then sings for us (94a)

(i) Proposed LF
\[
[\text{TP [ always when we arrive at his house ]}; [ T_1 [ \text{PRV [ he sing ]} ]...]]
\]

(ii) Predicted Truth-Conditions
\[
\forall t' . \exists e. T(e) = t' & \text{arrive(e,w)} & \text{Ag(e,w) = us} & \text{Loc(e,w) = Tom's} \rightarrow \\
\exists e'. T(e) \subseteq t' & \text{sing(e',w)} & \text{Ag(e',w) = Tom}
\]

Every time \( t' \) that is the time of an event our arriving at Tom’s house contains (coincides with) the time of an event of Tom’s singing. 16

b. Scenario: Whenever we see him, he’s always in the middle of singing (94b)

\[
\begin{align*}
\text{Wutusateení,} & \quad \text{ch'a tlák\ wu shée nooch.} \\
\text{PRV.1plS.see.SUB} & \quad \text{just always IMPRV.3S.sing HAB}
\end{align*}
\]

Whenever we see him, he’s always singing. (SE)

(i) Proposed LF
\[
[\text{TP [ always when we see him ]}; [ T_1 [ \text{IMPRV [ he sing ]} ]...]]
\]

(ii) Predicted Truth-Conditions
\[
\forall t' . \exists e. T(e) = t' & \text{see(e,w)} & \text{Ag(e,w) = us} & \text{Thm(e,w) = Tom} \rightarrow \\
\exists e'. t' \subseteq T(e') & \text{sing(e',w)} & \text{Ag(e',w) = Tom}
\]

Every time \( t' \) that is the time of an event our seeing Tom is contained within the time of an event of Tom’s singing.

16 Again, these truth-conditions are only accurate modulo the independent issue noted earlier in (82).
Accurate Semantic Prediction: Actuality Entailments of Habitual Mode

- Habitual Mode does not introduce any quantification over other possible worlds. Therefore, Habitual Mode sentences will (generally) entail the existence of VP-events in the actual world!

a. (i) Sentence:
Yá yées aa washéen kúnáx linúktsi coffee áwé
DEM new PART machine very IMPRV.3S.sweet.REL coffee FOC
ool.úkch
3O.HAB.PRV.3S.boil

This new machine boils great coffee.


(ii) Proposed LF: [ T1 [ IMPRVHAB [ this machine boil great coffee ] ] ]

(iii) Predicted Truth-Conditions:
∀/∃t’. ϕ(t’): ∃e. T(e) ⊆ t’ & boil(e,w) & Ag(e,w) = this.machine &
∃y . good.coffee(y,w) & Thm(e,w) = y

At some / every relevant time t’, there is an event in the actual world w of
this machine boiling great coffee.

b. (i) Sentence:
Yá yées aa washéen kúnáx linúktsi coffee áwé
DEM new PART machine very IMPRV.3S.sweet.REL coffee FOC
al.úkx
3O.IMPRV.3S.boil.REP

This new machine boils great coffee.

Proposed LF: [ T1 [ IMPRVHAB [ this machine boil great coffee ] ] ] ]


(iii) Predicted Truth-Conditions:
∀w’ ∈ HABIT(w, g(1)). ∃e. g(1) ⊆ T(e) & *boil(e,w’) &
*Ag(e,w’) = this.machine & ∃y . good.coffee(y,w’) & Thm(e,w’) = y

In all the worlds w’ where the ‘habits’ in w at g(1) are satisfied, g(1) is
surrounded by a bunch of events at w’ of this machine boiling great coffee.
Untested Prediction

- Note that the ‘Habitual Mode’ sentences in (34)-(36) and (96) are all in the ‘Habitual Perfective’ Mode...

- A habitual imperfective sentence like (97a) below, however, should allow a reading where its AspP is headed by IMPRV\textsubscript{HAB} (97b)

- Under such a parse, the sentence would not entail the existence of VP-events!
  - This prediction has yet to be tested with speakers...

\begin{enumerate}
  \item a. \texttt{Ax tláa x’úx’ ahón nooch.}  
    \texttt{1sgPOSS mother book 3O.IMPRV.3S.sell HAB}  
    \texttt{My mother sells books.} \hspace{1cm} (LA)
  \item b. \texttt{[ ADV\textsubscript{1} [ T\textsubscript{1} [ IMPRV\textsubscript{HAB} [ my mom sell books ] ] ] ]}
  \item b. \texttt{∀/∃t’. \varphi(t’): ∀w’ \in HABIT(w, t’). ∃e. t’ \subseteq T(e) & *sell(e, w’) & }  
    \texttt{Agent(e, w’) = my.mother & ∃y. books(y, w’) & Thm(e, w’) = y}  
    \texttt{Some / every relevant time t’ is such that in all the worlds w’ where the ‘habits’ in w at t’ are satisfied, t’ is surrounded by a bunch of events at w’ of my mom selling books.}
\end{enumerate}

Accurate Semantic Prediction: Interactions Between Habitual and Statives

- Under our account, a stative verb in Habitual Mode like (98a) would have a syntax/semantics akin to a temporally quantified stative in English (98b).

- Thus, just like the latter (84), the former will implicate that the state does not hold permanently, which in some cases will lead to anomaly.

\begin{enumerate}
  \item a. \texttt{# Ax ēesh aṣ tláa asixán nooch}  
    \texttt{1sgPOSS father 1sgPOSS mother 3O.IMPRV.3S.love HAB}  
    \texttt{My father often/always/regularly loves my mother.} \hspace{1cm} (C)
    \texttt{Speaker Comment: “[Sentence (98a)] means my dad loves my mom occasionally or intermittently.” (JM)}
  \item b. \texttt{Sentence: # Every December, my father loves my mother.}  
    \texttt{Implicature: The speaker’s father doesn’t love their mother at other times, only intermittently.}
\end{enumerate}
More Examples of ‘Intermittance’ / ‘Discontinuity’ Inference with Habitual Statives

a. # Aḵ éesh káax nasteech.
   1sgPOSS father man.at HAB.PRV.3S.be
   My father is (usually, sometimes, often) a man.
   (C)
   Speaker Comments: <Laughter> “He’s a man once in a while!” (MD)

b. # Góon diyéshḵ nooch.
   gold IMPRV.3S.rare HAB
   Gold is (usually, sometimes, often) rare.
   (C)
   Speaker Comment: “No; it’s rare all the time” (SE)

c. Has Shayadihéin nooch wé táax’aa
   PL.IMPRV.3S.be.many HAB DEM mosquito
   Mosquitos are (usually, sometimes, often) numerous.
   (C)
   Speaker Comments: “It’s okay if you restrict it.” <Offers (99d) instead> (SE)

d. Kutaanx’ has Shayadihéin nooch wé táax’aa
   summer.in PL.IMPRV.3S.be.many HAB DEM mosquito
   Mosquitos are numerous in the summer.
   (SE)

7.1 Some Outstanding Issues & Challenges For the Proposed Account

Habitual Perfective and Generics

- It appears that Habitual Perfective mode can be used to express generics (100a)
- How is this possible if these sentences do not contain an [IMPRV]?

a. Xáat at nahinch.
   salmon HAB.PRV.3S.swim.
   Salmon swim (MD)

b. Possible Solution:
   Perhaps in (101a), it is not IMPRV that ‘unselectively binds’ the indefinite subject xáat ‘salmon’, but the temporal quantifier induced by Habitual Mode?

   (i) Possible LF [ ADV₁,₂ [ T₁ [ PRV [ salmon₂ swim ] ] ] ]

   (ii) Predicted Truth-Conditions:
   ∀/∃t’, x . φ(t’) & salmon(x,t’,w) . ∃e. T(e) ⊆ t’ & swim(e,w) & Ag(e,w) = x

   For some / every relevant time t’ and salmon x at t’,
   there is an event of x swimming at t’

c. Problem:
   The truth-conds in (100b) wrongly entail that every salmon swims at every time
(101)  **An Even More Puzzling Generic**

a. **Question:** In the sentences in (101b), what licenses the appearance of English simple present (101bi) and Tlingit Habitual Perfective (101bii)?

b. **Puzzling Sentences:**

(i) Everyone tries my cooking only once.

(ii) Ldakát ḵáach aḵ atgas.éeyi ch’ás tleix’dahéen all person.ERG 1sgPOSS cooking only once

   has ooχáaych.

   PL.3O.HAB.PRV.3S.eat

   All people eat my cooking only once. (MD)

c. **The Puzzle:**

• If the analysis here is on the right track, both sentences would contain PRV in the scope of a temporal quantifier…

  o But, *what is the temporal quantifier?* No obvious options seem right…

• Putting aside the analysis of ‘Habitual Perfective’, we could suppose that the English simple present in (101bi) is an IMPRV HAB…

  o But, our semantics for IMPRV HAB entails a plurality of ‘trying my cooking’ events, which is in conflict with the modifier *only once*…

(102)  **Another Puzzle: Habitual Mode and Delimiting (Frame) Adverbs**

As reported for the ‘periphrastic habitual’ construction in Modern Hebrew (Boneh & Doron 2008), Tlingit Habitual Mode is incompatible with a frame adverb delimiting the time of the ‘habit’.

a. Tatgé áwé ch’a tlákw káaxwee álóok Jáan.

   yesterday FOC just always coffee 3O.IMPRV.3S.sip John

   *Yesterday, John was always drinking coffee.* (LA)

b. * Tatgé áwé ch’a tlákw káaxwee álóok nooch Jáan.

   yesterday FOC just always coffee 3O.IMPRV.3S.sip HAB John

However, if a quantificational adverb has scope over the delimiting (frame) adverb, then the sentence is acceptable.

c. Tlákw nás’k gaaw χ’áanáx yéi jinaneich Jáan.

   always three hour through HAB.PRV.3S.work John

   *John always worked for three hours.* (MD)

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(103) **Imperfective, Perfective, and Quantificational Adverbs**
While it is true that quantificational adverbs in Tlingit generally co-occur with Habitual Mode verbs (89), this isn’t obligatory.

a. Haa keidlí tlákw asháa.
   1plPOSS dog always IMPRVR.3S.bark
   *Our dog always barks.* (LA)

b. **Consequence:**
The ‘Spell-Out’ rule for Habitual in (91) must somehow be made ‘optional’

c. **Bigger Problem:**
If the expression of Habitual mode is optional, then it should be possible for the combination of a temporal quantifier like *tlákw* ‘always’ and a Perfective mode verb (101ci) to get the same ‘habitual’ reading as a Habitual Perfective (101cii)

   (i) Tlákw aχ éesh čáat aawaxáa.
       always 1sgPOSS father salmon 3O.PRV.3S.eat  (C)

   (ii) Aχ éesh čáat uχáaych.
       1sgPOSS father salmon 3O.HAB.PRV.3S.eat
       *My father eats salmon.*  (SE)

   • I haven’t tested it yet, but I strongly suspect speakers will not allow (101ci) to have the same ‘habitual’ interpretation as (101cii)

(104) **Cross-Linguistic Generality**

• The analysis of Tlingit ‘Habitual Mode’ as a ‘quantificationally dependent tense’ nicely fits the observed morpho-syntax of this expression in Tlingit (93)

• But how well would such an account fit other instances of ‘habitual markers’ that carry the same ‘actuality entailments’ as Tlingit Habitual Mode?

a. Habitual ‘Be’ in African American English (Green 2000):
   (i) Bruce *sings* ‘Bruce sings’  (ii) Bruce *be singing*. ‘Bruce sings’

b. Habitual Suffix in Czech (Filip 2018):
   (i) Honza *sedí* v hospodě  (ii) Honza *sedává* v hospodě
      John *sit.* IMPRVR in pub  John *sit.HAB* in pub
      *John sits in a pub*  *John sits in a pub.*

c. Perphrastic Habituals in Hebrew (Boneh & Doron 2008)
   Y’ael *{ nas’a / hayta nosa’-at }* la-’avoda ba-’otobus
   Yael *go.PAST HAB.PAST go-PTCPL to-work by-bus
   *Yael went (used to go) to work by bus.*
Some Remarks on the Generality of Our Analysis

• What’s key to our account of the actuality entailments (96) is that the ‘habitual marker’ involves (i) quantificational binding of tense, with (ii) a non-modal aspect

• This story could fit with the morpho-syntax of the other constructions in (104)
  o In AAE (104a), the habitual marker is an AUX be, with PROG in its scope
    ▪ PROG aspect in English does not have the ‘habitual’ reading of IMPRV
  o In Hebrew (104c), the habitual marker is an AUX, with a participle in its scope
  o In Czech (105b), the habitual marker is a ‘higher aspect’, taking an IMPRV in its scope…
    ▪ Perhaps this lower IMPRV in Czech habituals must be IMPRV\textsubscript{OG}?

8. Conclusions

‘Habitual’ Morphology as Quantificationally Dependent Tenses

Some languages specially mark sentences when the tense is quantificationally bound (e.g. Tlingit and its ‘Habitual Mode(s)’)

• In sentences where there is no overt temporal quantifier, this can lead to the impression that the marking itself contributes such quantification
  o (And thus contributes a ‘habitual’ semantics…)

• A possible hallmark of such marking may be that it requires events of the kind described by the VP to have actually occurred

English Simple Present ‘Habituals’ As Syntactically/Semantically Ambiguous

In English, simple presents in the scope of temporal quantificational adverbs are ambiguous between: (i) present imperfective (habituals), and (ii) present perfectives.

• Due to the ability for temporal quantifiers to be implicit (anaphoric) in a sentence, English simple present verbs appearing alone in a sentence are also ambiguous:
  (i) Present imperfective (habituals)
  (ii) Present perfectives (in scope of implicit / anaphoric / null) quantifier
(108) Two Paths to Habituality

In sum, there are (at least) two syntactic/semantic paths to a verbal form being ‘habitual’, which can be distinguished overtly (Tlingit) or not (English).

a. Habituality Through a Modal Generic/Habitual IMPRV Head:

\[
[TP \ T [AspP IMPRV_{HAB} [VP my father eat salmon] ... ]]
\]

b. Habituality Through an Implicit Quantifiers, with PRV or IMPRV\_OG Aspect

\[
[TP \ TempQuant [TP \ T [AspP PRV / IMPRV\_OG [VP my father eat salmon] ... ]]
\]

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