# Cumulative Closure vs. Iterativity in Tlingit

Laurestine Bradford

TOM 17
May 10, 2025
University of Ottawa

# Table of Contents

# Outline

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)


Scope: 20 > 10 (each child ate 10 pizzas)?

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)


Scope: $20 > 10$ (each child ate 10 pizzas)? X

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)


Scope: $20 > 10$ (each child ate 10 pizzas)? X

Scope: $10 > 20$ (each pizza was eaten by 20 children)?

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)


Scope: $20 > 10$ (each child ate 10 pizzas)? X

Scope: $10 > 20$ (each pizza was eaten by 20 children)? X

# Why we need cumulative closure

"Twenty children ate ten pizzas." (Kratzer, 2008)


A total of 10 pizzas and 20 kids participated in the feast.

$\exists x.x$ is 20 kids $\wedge\, \exists y.y$ is 10 pizzas $\wedge\, \exists e.\mathrm{eat}(e) \wedge \mathrm{Ag}(e, x) \wedge \mathrm{Th}(e, y)$

# Algebraic formulation of cumulative closure

"Twenty children ate ten pizzas."

$$\exists x.x \text{ is 20 kids} \wedge \exists y.y \text{ is 10 pizzas} \wedge \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$$

# Algebraic formulation of cumulative closure

"Twenty children ate ten pizzas."

$\exists x.x \text{ is 20 kids} \wedge \exists y.y \text{ is 10 pizzas} \wedge \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$

Need $\text{Ag}(e, x)$=True even if not all individuals constituting $x$ do all of the actions constituting $e$.

# Algebraic formulation of cumulative closure

"Twenty children ate ten pizzas."

$\exists x.x$ is 20 kids $\wedge\, \exists y.y$ is 10 pizzas $\wedge\, \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$

Need $\text{Ag}(e, x)$=True even if not all individuals constituting $x$ do all of the actions constituting $e$.

$f : (x_1, x_2, ..., x_n) \rightarrow \{T, F\}$ is *cumulatively closed* (Kratzer, 2008; Krifka, 1992) iff for all $x_1, \ldots, x_n, y_1, \ldots, y_n$,

$$(f(x_1, x_2, \ldots, x_n) \wedge f(y_1, y_2, \ldots, y_n)) \rightarrow f(x_1{+}y_1, x_2{+}y_2, \ldots, x_n{+}y_n)$$

**If** our predicates are cumulatively closed:

- $\text{eat}(e_1 + e_2)$ is true whenever $\text{eat}(e_1)$ and $\text{eat}(e_2)$ are both true
- $\text{Ag}(e_1 + e_2, x_1 + x_2)$ is true whenever child $x_1$ is the agent of $e_1$ and child $x_2$ is the agent of $e_2$
- etc.

# Algebraic formulation of cumulative closure

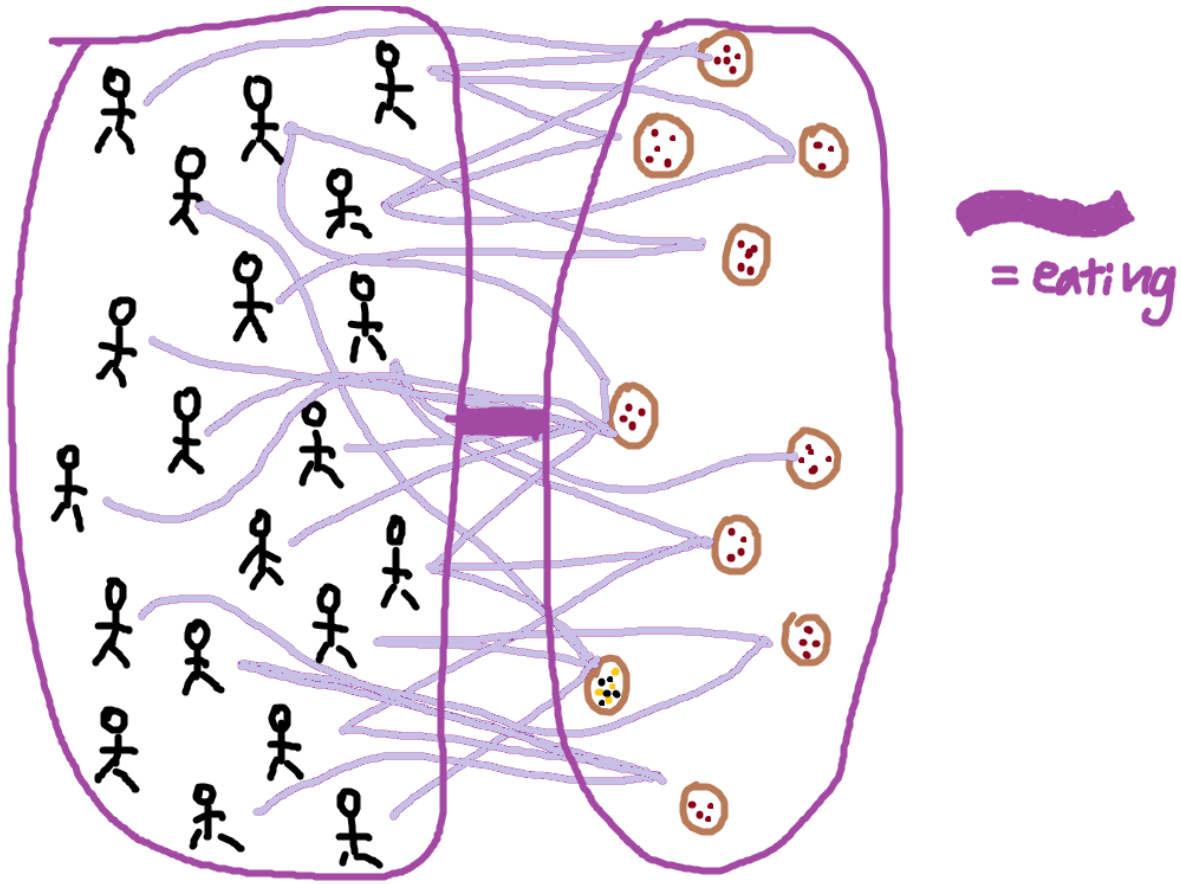
"Twenty children ate ten pizzas."

$$\exists x.x \text{ is 20 kids} \wedge \exists y.y \text{ is 10 pizzas} \wedge \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$$

# Algebraic formulation of cumulative closure

"Twenty children ate ten pizzas."

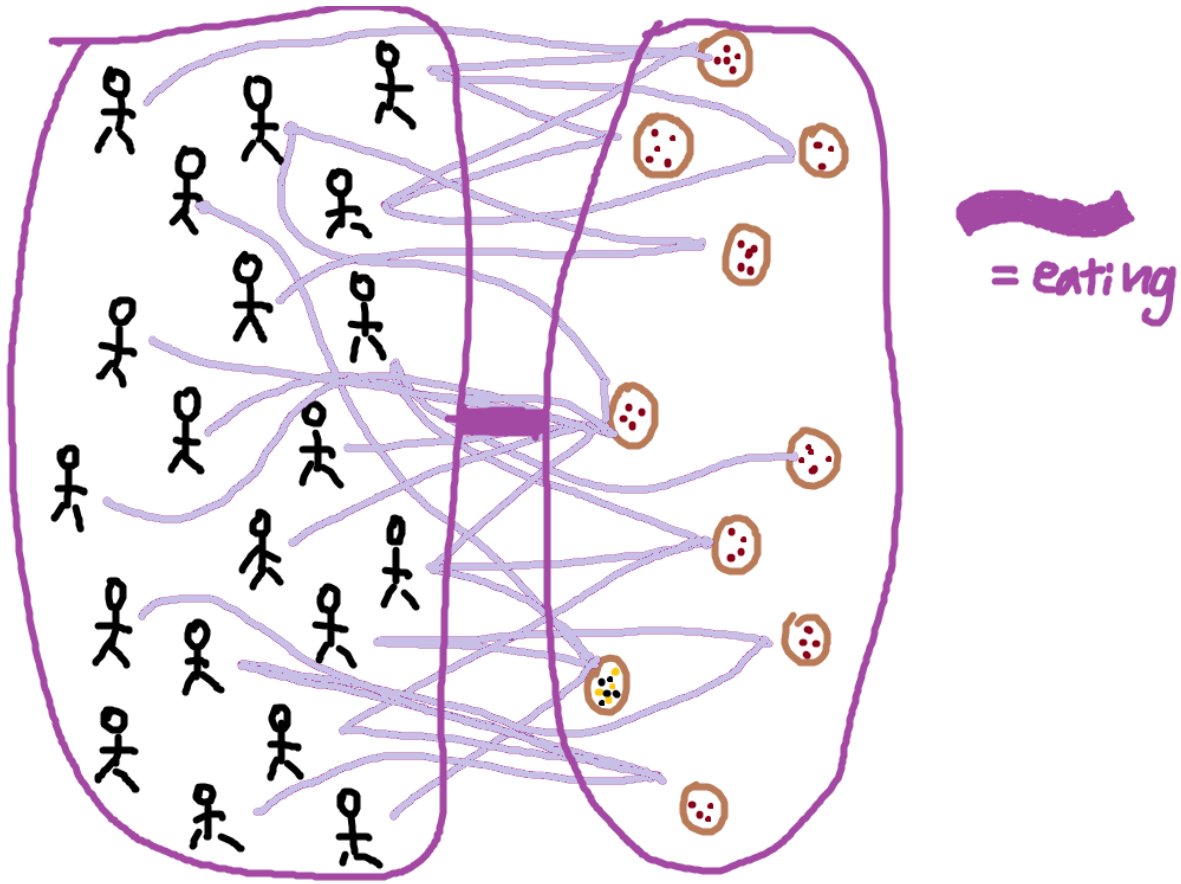
$\exists x.x \text{ is 20 kids} \wedge \exists y.y \text{ is 10 pizzas} \wedge \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$



# Algebraic formulation of cumulative closure

"Twenty children ate ten pizzas."

$\exists x.x$ is 20 kids $\wedge \exists y.y$ is 10 pizzas $\wedge \exists e.\text{eat}(e) \wedge \text{Ag}(e, x) \wedge \text{Th}(e, y)$




Cumulativity might just be a fact of life for all predicates in natural language. (Kratzer, 2008; Krifka, 1992)... but it might not.

# Cumulative closure as an operation

We can make a cumulatively closed predicate out of any predicate:

For any $f : (x_1, x_2, ..., x_n) \rightarrow \{T, F\}$, set $f^*$ (the cumulative closure of $f$) to be the smallest extension of $f$ which is cumulatively closed.

Often hypothesized that this operation must be possible at some levels of syntax (Beck & Sauerland, 2000; Kratzer, 2008).

# Cumulative closure as an operation

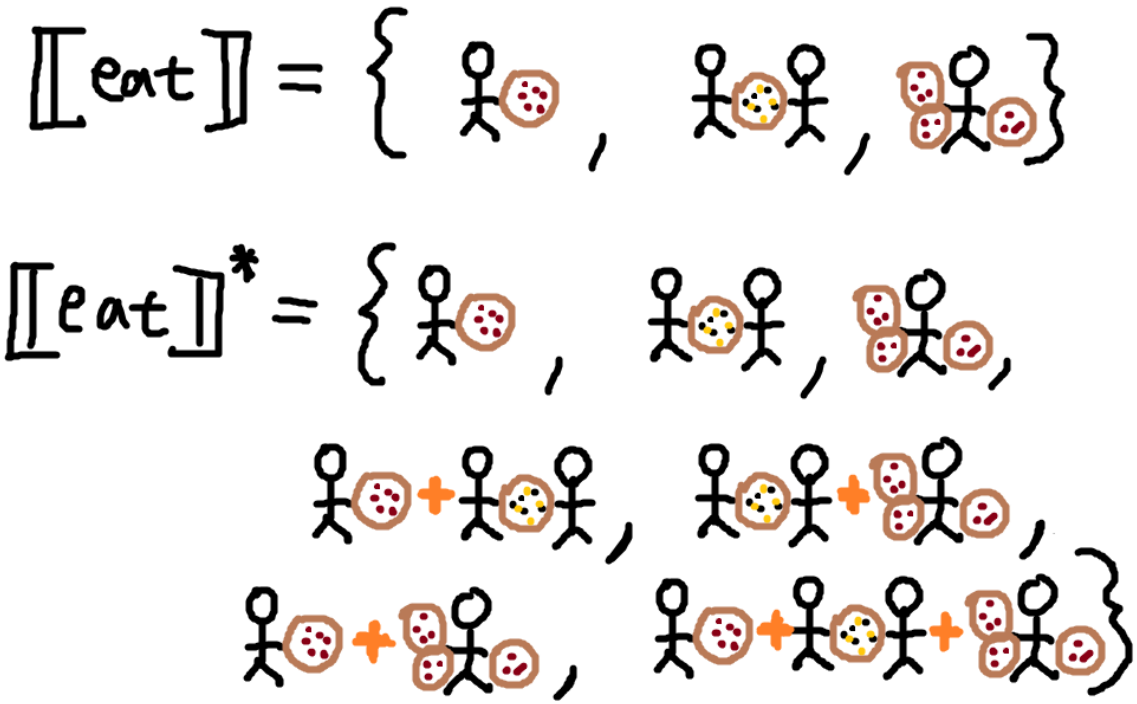
We can make a cumulatively closed predicate out of any predicate:

For any $f : (x_1, x_2, ..., x_n) \rightarrow \{T, F\}$, set $f^*$ (the cumulative closure of $f$) to be the smallest extension of $f$ which is cumulatively closed.

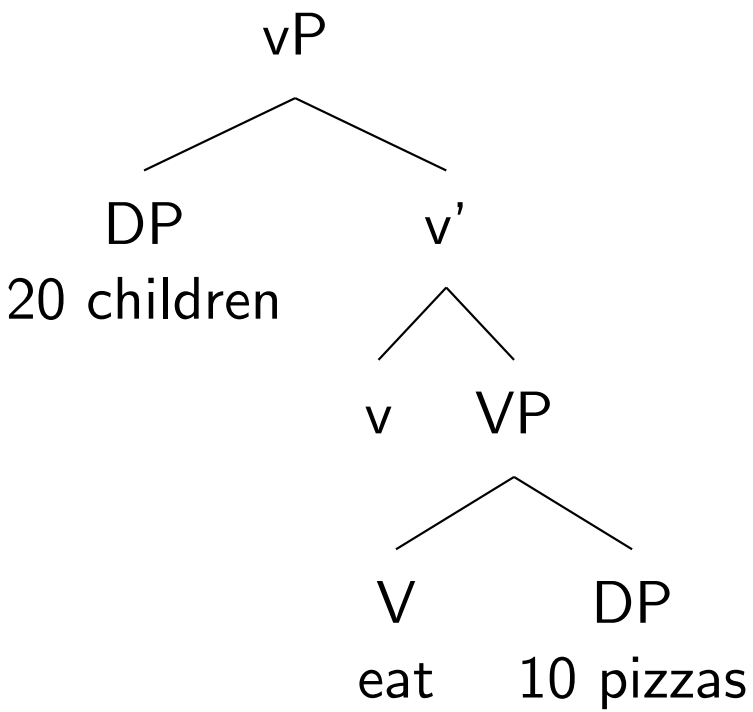
Often hypothesized that this operation must be possible at some levels of syntax (Beck & Sauerland, 2000; Kratzer, 2008).

I'll start from the conclusion of Henderson (2012) that all verb predicates in utterances are cumulatively closed somehow, but they might not come that way from the lexicon.

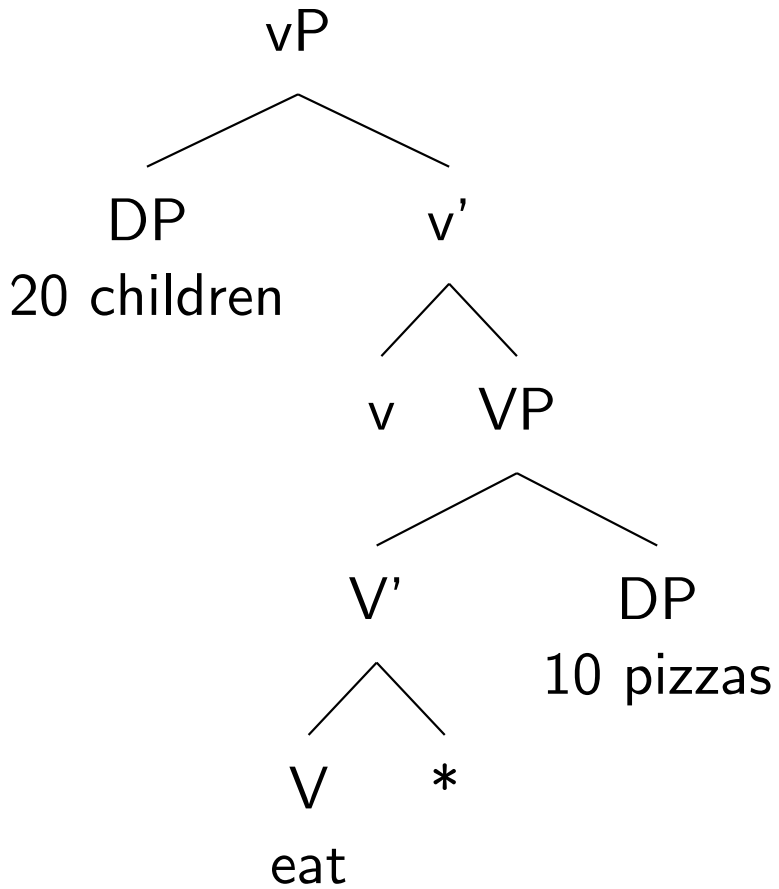
# Cumulative closure as an operation



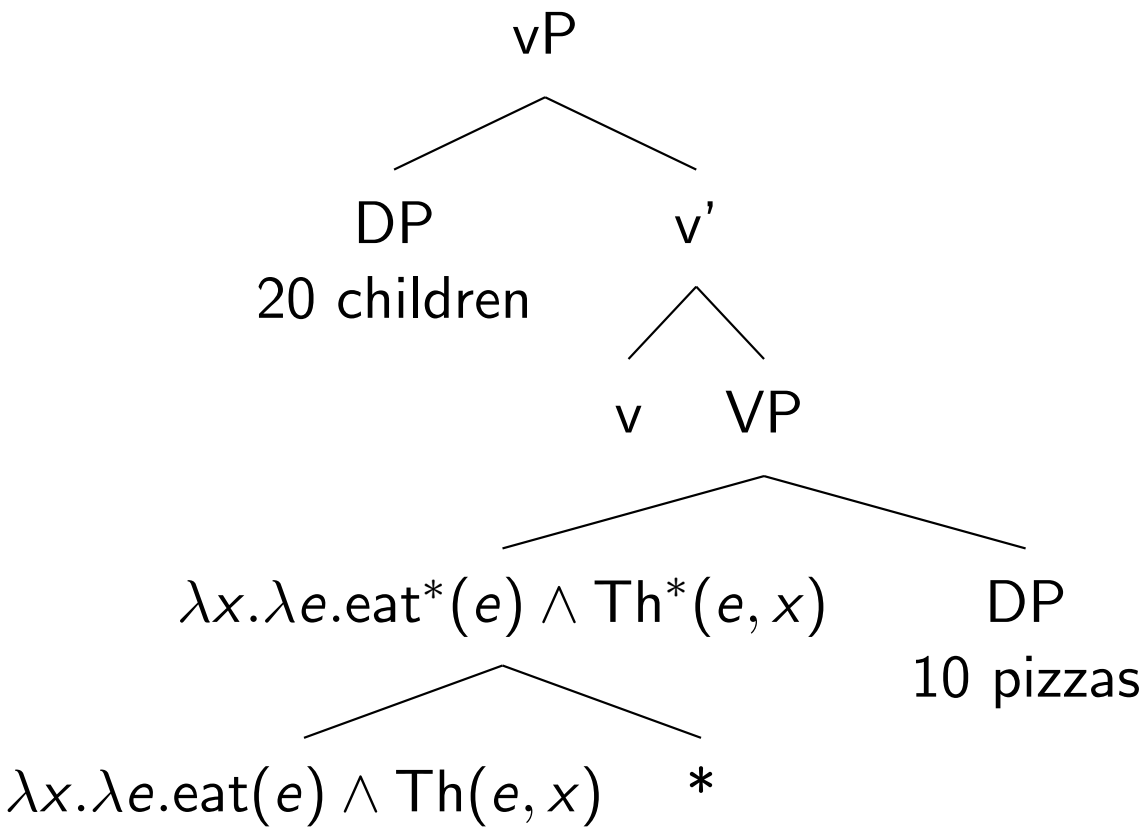
# Cumulative closure as an operation



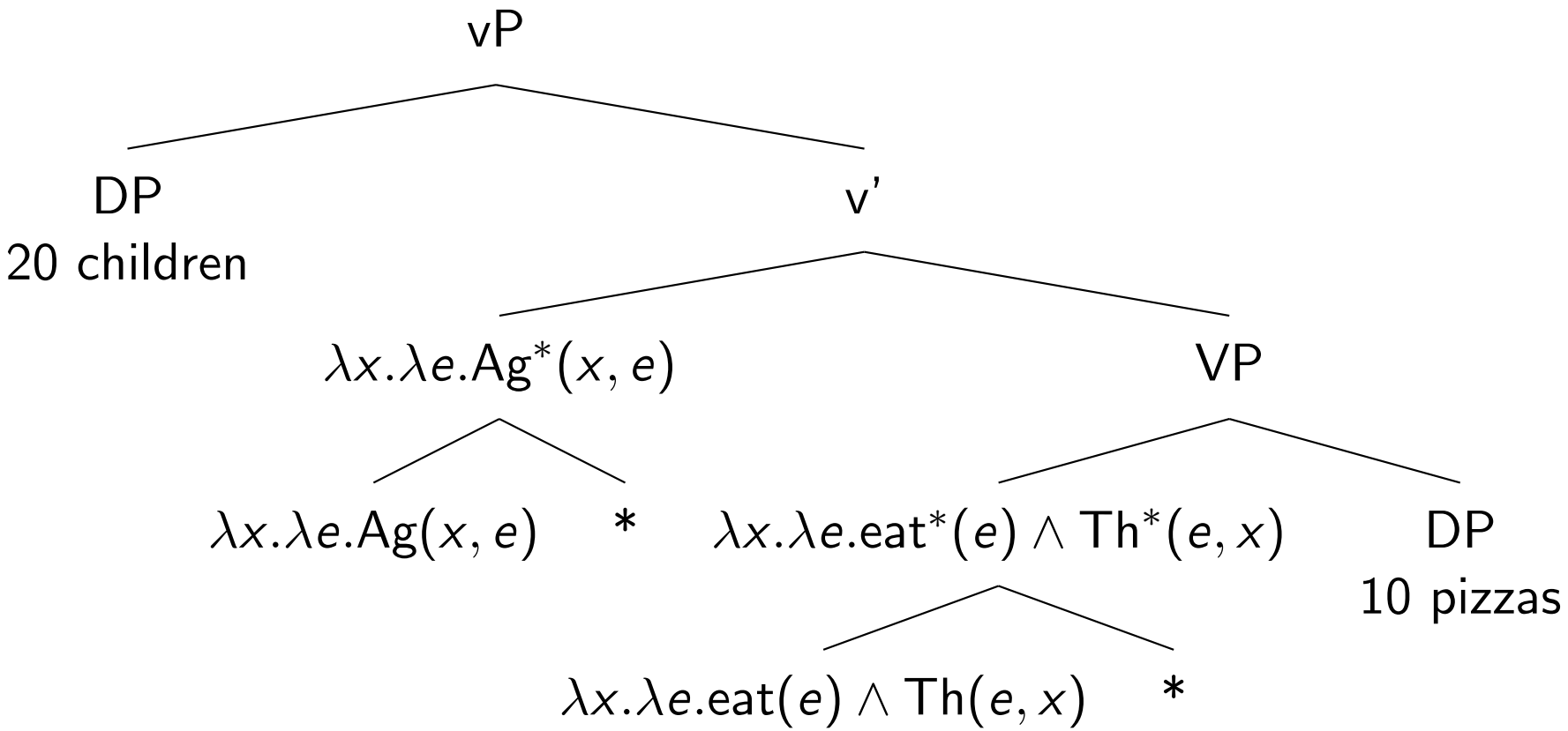
# Cumulative closure as an operation



# Cumulative closure as an operation



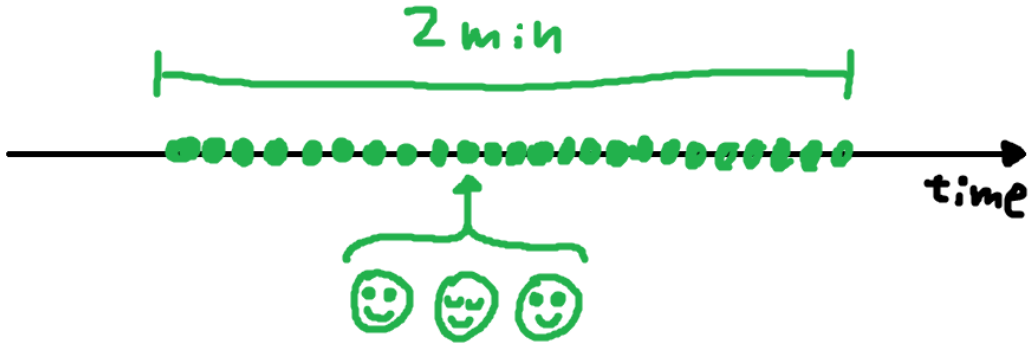
# Cumulative closure as an operation



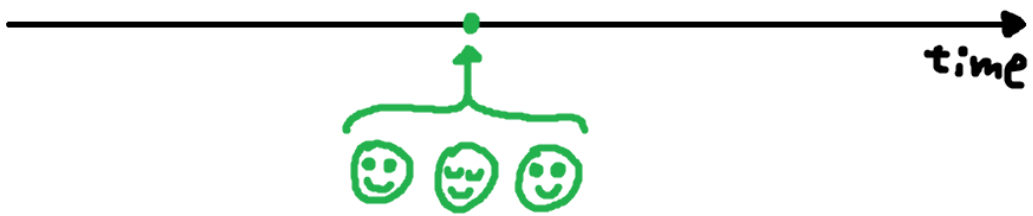
# Outline

# Iterative interpretations of instantaneous events

"John blinked for two minutes."




c.f. "John blinked once."



# Where does this interpretation come from?

Dölling (2014); Rothstein (2004); i.a.: Specific coercion operations are triggered when the wrong aspectual class is modified by a durative adverbial.

Levin (2009); Wilhelm (2007): Verbs that take this interpretation are of an aspectual class underspecified for durativity - they always have both iterative and non-iterative interpretations.

Sampaio and França (2018); Smith (1997): When an event is described as having an atypical duration, regardless of aspectual class, it can be reinterpreted as iterative.

# Does iterativity come for free with cumulative closure?

(23) (a) I dialed a wrong phone number for 5 minutes.
(b) She bounced a ball for 20 minutes.
(c) He kicked a wall for a couple of hours.
(d) She opened and closed a drawer for half an hour.
(e) I petted a rabbit for two hours.

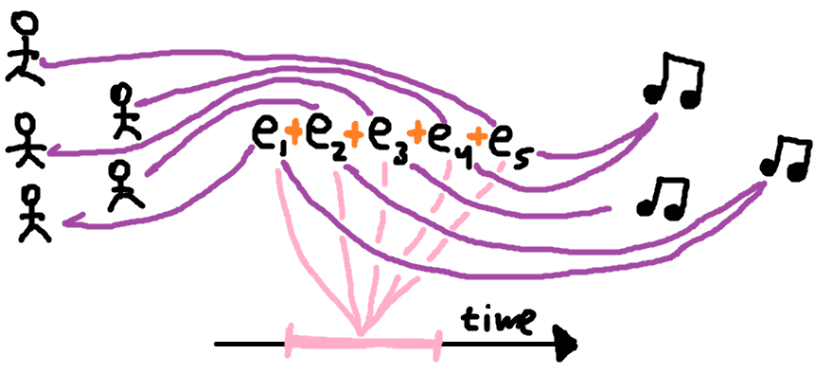
Kratzer (2008) uses restrictions on argument scope in the above to argue for restrictions on the scope of $*$, implicitly assuming that $*$ is responsible for the iterativity.

# Why wouldn't it come from cumulative closure?

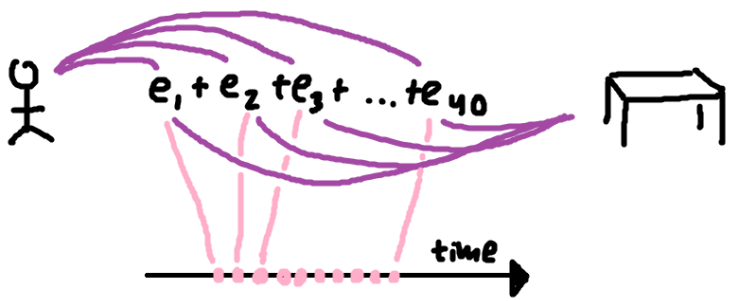
Argument structure and temporal structure of an event need not be directly linked (notwithstanding well-documented aspectual effects of arguments - Krifka, 1992, i.a.).

We can individuate events in either dimension independently (c.f. Henderson, 2012; Lasersohn, 1994; Ojeda, 1998):

"Five boys sang three songs simultaneously."

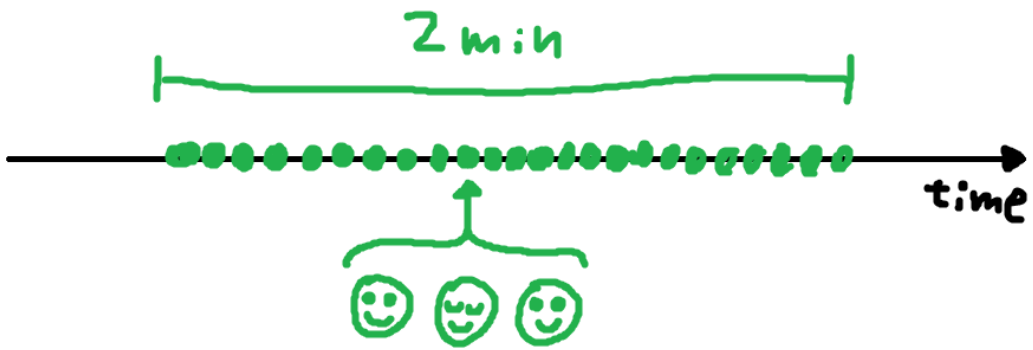



"John tapped the table for ten seconds."



# Why wouldn't it come from cumulative closure?

Plural-object-forming sum operation $\{+\}$ used in defining cumulative closure may not have the requisite temporal effects for iterativity, such as the strong implication that sub-events have adjacent and non-overlapping temporal traces (Rothstein, 2004).



# Outline

# Tlingit (*Lingít* [ɬìn'kít])

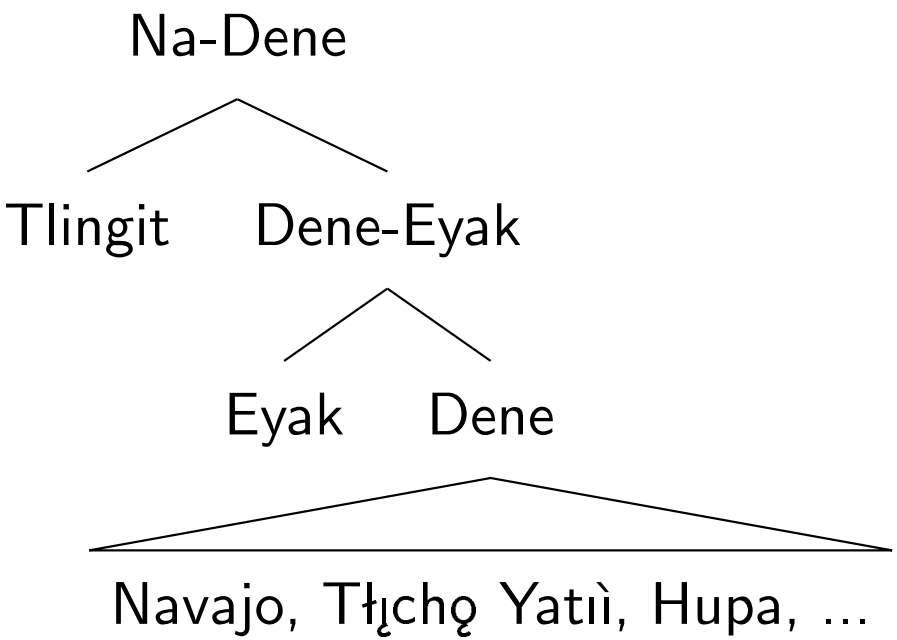



Figure: Tlingit's family tree

- About 100 fluent speakers as of 2018. (Twitchell, 2018)
- Numerous revitalization programs, including language nest, school and university classes, adult classes. (Burge, 2024)

# Tlingit country

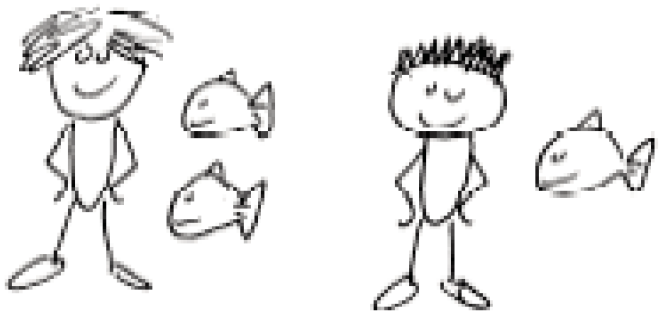
Figure: Tlingit country in North America

# Cable (2014) on cumulative closure in Tlingit

Cable (2014) establishes that verb predicates behave as cumulatively closed.

Context: *My sons Tom and Ben went fishing. Tom caught two fish. Ben caught one.*

(1) Ax̲ k̲áa yátx'i nás'k x̲áat has aawasháat.
my male children three fish 3PL 3>3.PFV.catch
"My sons caught three fish."



He says verbs are automatically cumulatively closed, but his analysis would work if cumulative closure happens anywhere in VP.

# Crippen (2019) on iterativity in Tlingit

Many verbs, like *jak* "kill", cannot take bare imperfective aspect. Imperfective becomes possible with pluractional morphology.

(2) a. * Táax'aa xaják.
mosquito(es) 1SG.S.kill.PLUR
Intended: "I kill mosquitoes."
"I am killing a mosquito."

b. Táax'aa xajákx.
mosquito(es) 1SG.S.kill.PLUR
"I repeatedly kill mosquitoes."
"I keep trying to kill a mosquito."

# Crippen (2019) on iterativity in Tlingit

Many verbs, like *jaḵ* "kill", cannot take bare imperfective aspect. Imperfective becomes possible with pluractional morphology.

(2) a. * Táax'aa xajáḵ.
mosquito(es) 1SG.S.kill.PLUR
Intended: "I kill mosquitoes."
"I am killing a mosquito."

b. Táax'aa xajáḵx.
mosquito(es) 1SG.S.kill.PLUR
"I repeatedly kill mosquitoes."
"I keep trying to kill a mosquito."

Crippen (2019)'s hypothesis: these are instantaneous verbs, and imperfective requires them to be durative, which requires overt iterative coercion.

# The tension

Cable (2014): Verbs' denotations are always cumulatively closed.

Crippen (2019): Some verbs denote instantaneous actions. Overt morphology is required when these are interpreted iteratively.

If both are correct, cumulative closure is not sufficient to allow iterative intepretation.

# Where we're headed today

- Pluractional morphology is not always necessary for iterative interpretation of achievements.
- Cumulative closure might not always happen at the level of the verb[1] itself, but it still must happen.
- Therefore, cumulative closure might still be the reason for iterative interpretation in Tlingit.

[1] V node in Syntax, which is smaller than the phonological word.

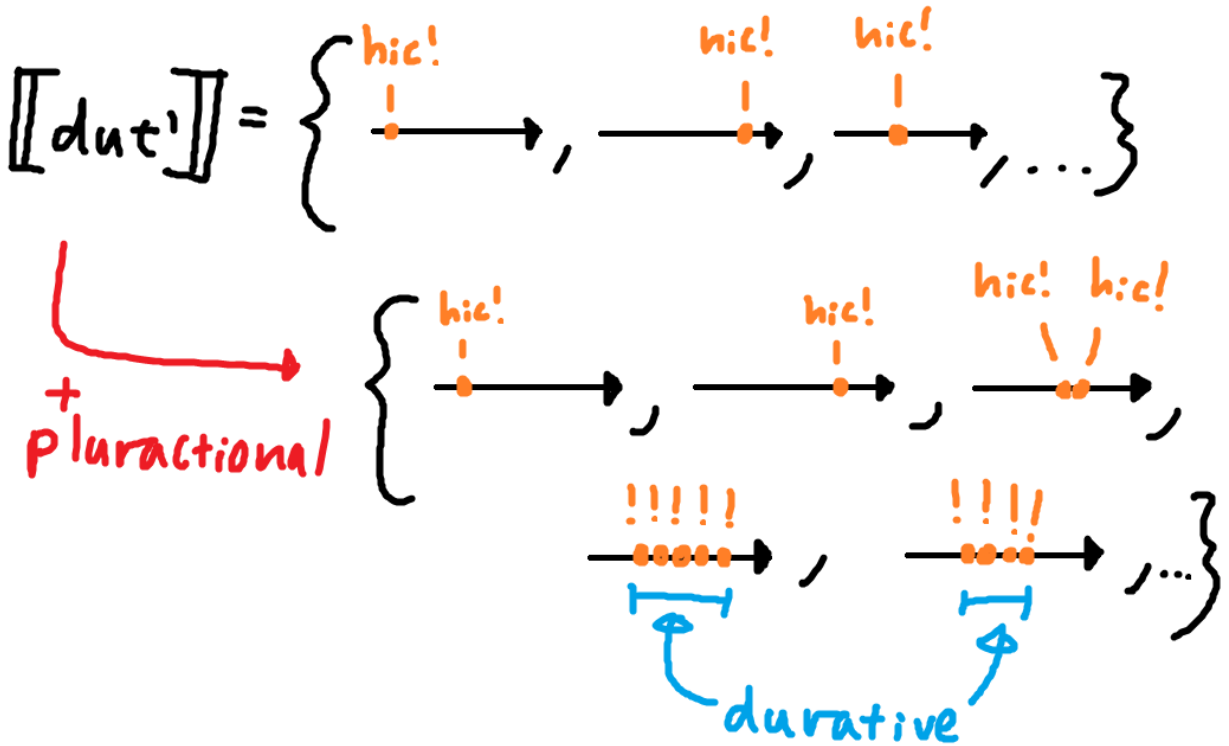
# Outline

# Tlingit eventive verb classes

| Class | Example | Pfv? | Bare Ipfv? | Prog? | Plurac? |
|---|---|---|---|---|---|
| Activity | *as.ée*<br>"cooking it [ipfv]" | :) | :) | :) | :) |
| Achievement | *uwadút'*<br>"hiccupped [pfv]" | :) | X | :) | :) |
| Motion | *yaa nagút*<br>"going by foot [prog]" | :) | X | :) | :) |
| Position | *hán*<br>"standing [ipfv]" | X | :) | X | X |
| Activity? | *akéet*<br>"snoring [ipfv]" | :) | :) | X | :) |
| Achievement? | *a.únx̲*<br>"shooting [plurac]" | :) | X | X | :) |

Data from Eggleston (2017), class names from Crippen (2019).

# Gaining durativity through pluractionality

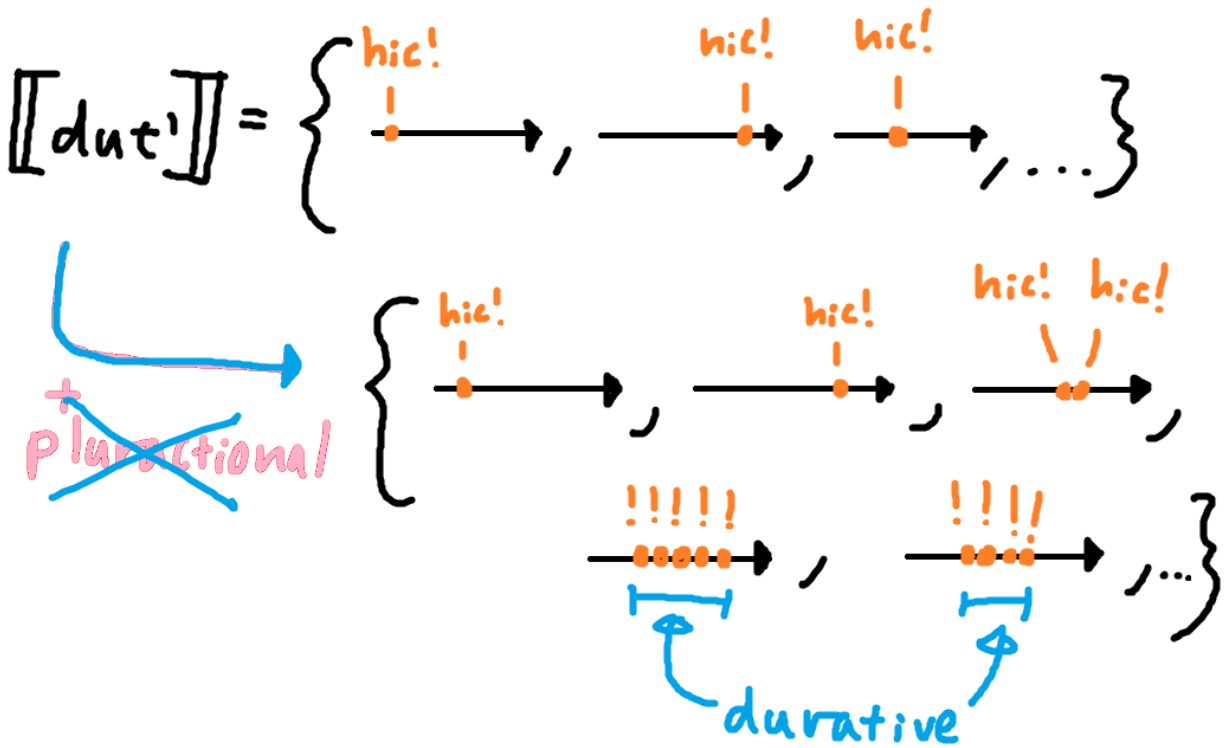



Crippen (2019): Pluractional creates durativity, which facilitates imperfective aspect.

# Iterative interpretation without pluractional morphology

(3) Yá k̲aa atk'átsk'u gwál nás'k gaaw x̲'áakx̲
this male adolescent maybe three hour span.at
uwadút'.
hiccup.PFV
"This little boy has been hiccupping for three hours." (SJ)

# Gaining (or having) durativity without pluractionality?



# Two possibilities

- Perfective can create iterativity in a way imperfective cannot. (Because imperfective is bare?)

- Iterativity comes for free (through cumulative closure?), and there is another reason imperfective achievements are ungrammatical.

# Outline

# Two kinds of pluractionality

*Multiple argument suffix* usually[2] requires different sub-events to have different themes/patients:

(4) Wé guwakaan áwé al.únx'.
that deer FOC 3>3.shoot.MULTARG
"He's shooting at those deer." (BJ)

Whereas other pluractionals allow repeats on same entity:

(5) Wé guwakaan áwé al.únt.
that deer FOC 3>3.shoot.PLUR
"He's shooting that deer." (BJ)

I will take for granted that both kinds require multiple sub-events somehow.

[2] Ask me about my cannon example.

# Cumulative interpretation in a mult-arg-suffix sentence

Context: *John bought fireworks that were supposed to be for the kids to play with, but he's using them up himself.*

(6) Yá yeedát áwé ldakát aa al.únx'.
this moment FOC all PART 3>3.shoot.MULTARG
"Right now he's setting them all off." (BJ)

Many sub-events, but only one event per firework.

# No cumulative interpretation with other pluractionals

Context: *A little kid with a flyswatter is trying to kill all the mosquitoes in the room.*

(7) # Ldakát wé táax'aa yax̲ yax̲lajákx̲.
all that mosquito(es) EXH 1SG.S.kill.PLUR
Intended: "I'm killing off all the mosquitoes!"
Comment (SJ): Well that's like you're *trying* to.

Context: *A daughter is helping her dad clean up after a party.*

(8) # Ldakát yá x'úx' s'íx' áyá aax̲ kei
all this paper plate(s) FOC there.from up
x̲ala.átch.
1SG.S.raise.PLUR
Intended: "I'm picking up all the paper plates."

# Repetition on all objects in a pluractional sentence

Context: *A person is selling shirts at a craft fair. Someone asks if they'll be back at the fair tomorrow They say no.*

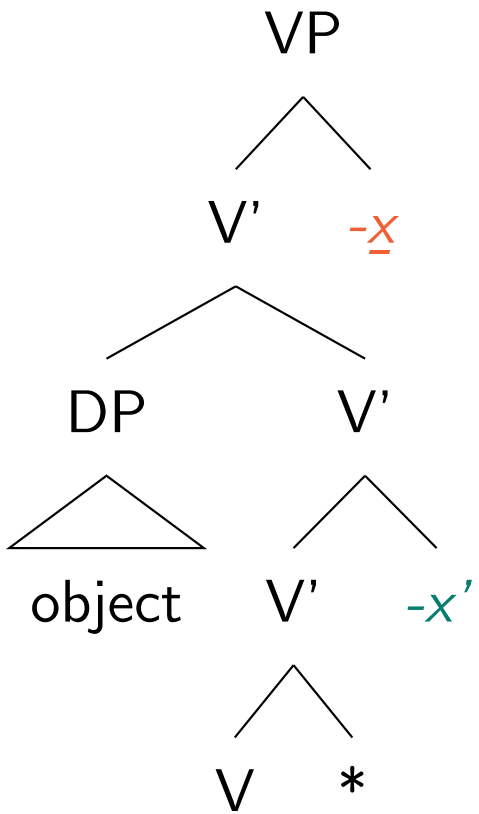
(9) Ldakát yá k'oodás' áyá yoo daxx̲ x̲aahúnk yéi
all this shirt(s) FOC ALT EXH 1SG.S.sell.PLUR this
yagee.
day.
"I'm trying to sell all these shirts today." (SJ)

# Distributing sub-events across bare noun objects

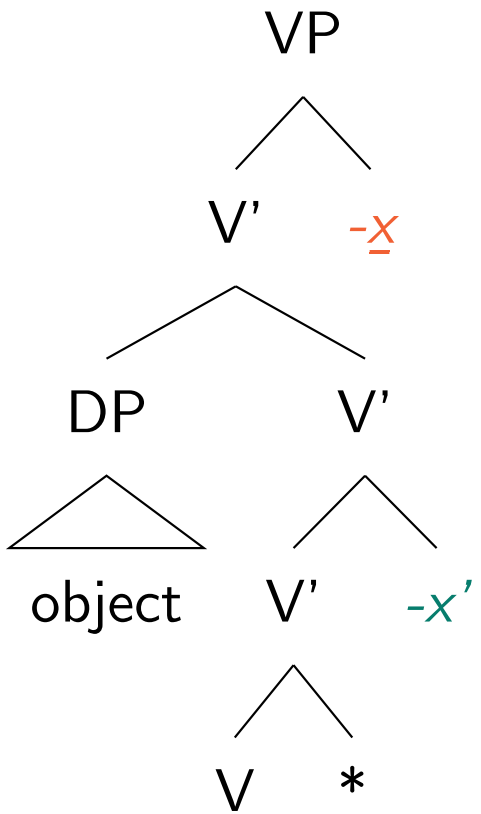
Context: *Describing someone doing target practice regularly over a long period of time.*

(10) At<u>x</u> áwé ch'u tle chooneit kei al.átch.
after.it FOC just then arrow(s) up 3>3.send.PLUR
"After that, then he keeps making his arrows go up."
(Swanton, 1909)

# Sensible first-guess scope for these suffixes



# Sensible first-guess scope for these suffixes




$[\![\text{-}\underline{x}]\!] = \lambda F_{st}.\lambda e_s.$ "$e$ is made up of several events in the extension of $F$"

# Sensible first-guess scope for pluractional suffixes

$[\![\text{-}\underline{x}]\!] = \lambda F_{st}.\lambda e_s.$ "$e$ is made up of several events in the extension of $F$"

(10) At<u>x</u> áwé ch'u tle chooneit kei al.átch.
after.it FOC just then arrow(s) up 3>3.send.PLUR
"After that, then he keeps making his arrows go up."

"$e$ is made up of several events that are each shootings of some arrows."

# Sensible first-guess scope for pluractional suffixes

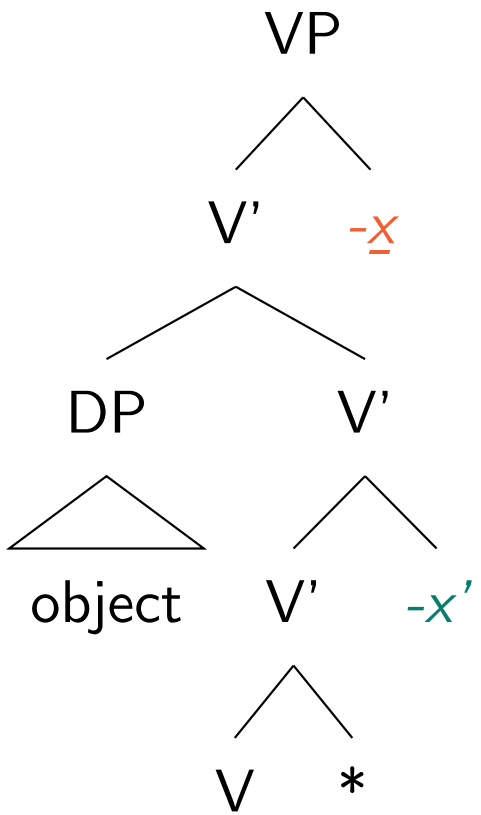
$[\![\text{-}\underline{x}]\!] = \lambda F_{st}.\lambda e_s.$ "$e$ is made up of several events in the extension of $F$"

(7) # Ldakát wé táax'aa yax yaxlajákx.
all that mosquito(es) EXH 1SG.S.kill.PLUR
Intended: "I'm killing off all the mosquitoes!"
Comment (SJ): Well that's like you're *trying* to.

(9) Ldakát yá k'oodás' áyá yoo dax xaahúnk
all this shirt(s) FOC ALT EXH 1SG.S.sell.PLUR
yéi yagee.
this day.
"I'm trying to sell all these shirts today."

"$e$ is made up of several events that are each hitting-all-mosquitos / selling-all-shirts."

# Sensible first-guess scope for pluractional suffixes




$[\![\text{-}x']\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$"$e$ is made up of several $e_i$ and $x$ is made up of several $x_i$ with $\forall i, F(x_i, e_i)$"

# Sensible first-guess scope for pluractional suffixes

$$[\![\text{-}x'\!]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.\text{“}e \text{ is made up of several } e_i \text{ and } x \text{ is made up of several } x_i \text{ with } \forall i, F(x_i, e_i)\text{”}$$

(6) Yá yeedát áwé ldakát aa al.únx'.
this moment FOC all PART 3>3.shoot.MULTARG
“Right now he's setting them all off.”

“$e$ is made up of several $e_i$ (shooting events) and all-the-fireworks is made up of several $x_i$ (individual fireworks) such that each $e_i$ is a shooting of firework $x_i$.”

# However: Does not match surface order of the suffixes.

Multiple-argument and other pluractionals rarely cooccur, but when they do, it is in this order:

(11) Áa yéi tíxx'w
there thus be.PLUR.MULTARG
"They are regularly there." (Leer, 1973)

# However: Does not match surface order of the suffixes.

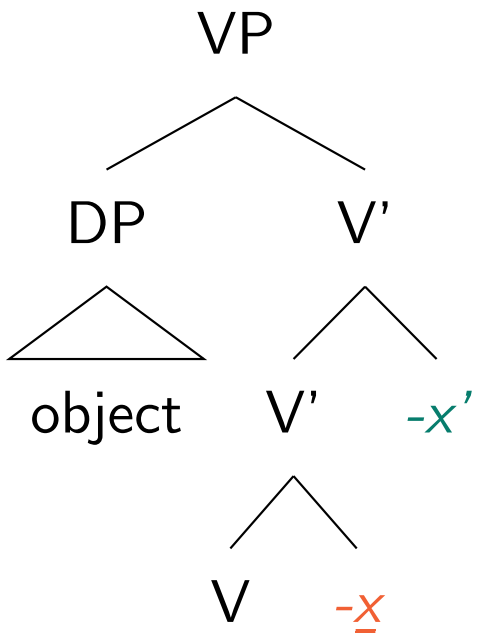
Multiple-argument and other pluractionals rarely cooccur, but when they do, it is in this order:

(11) Áa yéi tíxx'w
there thus be.PLUR.MULTARG
"They are regularly there." (Leer, 1973)

What if we want to match the surface order?

Because of its distributive behaviour, *-x'* should scope below the object.
So, *-x* < *-x'* < object.

# Surface-order-respecting scope for pluractionals




$[\![\text{-}\underline{x}]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$"$e$ is made up of smaller events, each of which is related to $x$ by $F$"

# Not quite right...

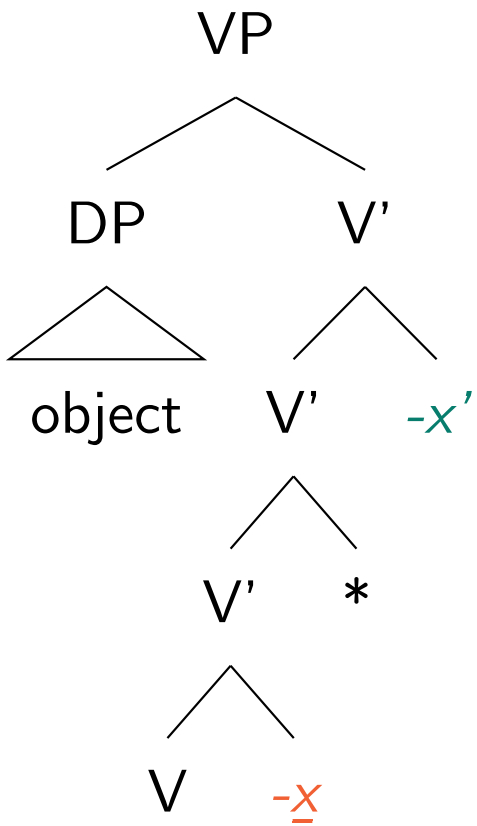
$[\![\text{-}\underline{x}]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$ "$e$ is made up of smaller events, each of which is related to $x$ by $F$"

But we don't want to shoot the same arrow every time:

(10) At$\underline{\text{x}}$ áwé ch'u tle chooneit kei al.átch.
after.it FOC just then arrow(s) up 3>3.send.PLUR
"After that, then he keeps making his arrows go up."

Can get around this...

# Surface-order-respecting scope for pluractionals with *




$[\![\text{-}\underline{x}]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$ "$e$ is made up of smaller events, each of which is related to $x$ by $F$"

# Surface-order-respecting scope for pluractionals with *

$[\![\text{-}\underline{x}]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$ "$e$ is made up of smaller events, each of which is related to $x$ by $F$"

(10) At<u>x</u> áwé ch'u tle chooneit kei al.átch.
after.it FOC just then arrow(s) up 3>3.send.PLUR
"After that, then he keeps making his arrows go up."

"$e$ is made a sum of medium-sized events, and the arrows are a sum of individual arrows; each medium-sized event goes with one arrow and is made up of several smaller events of shooting it"

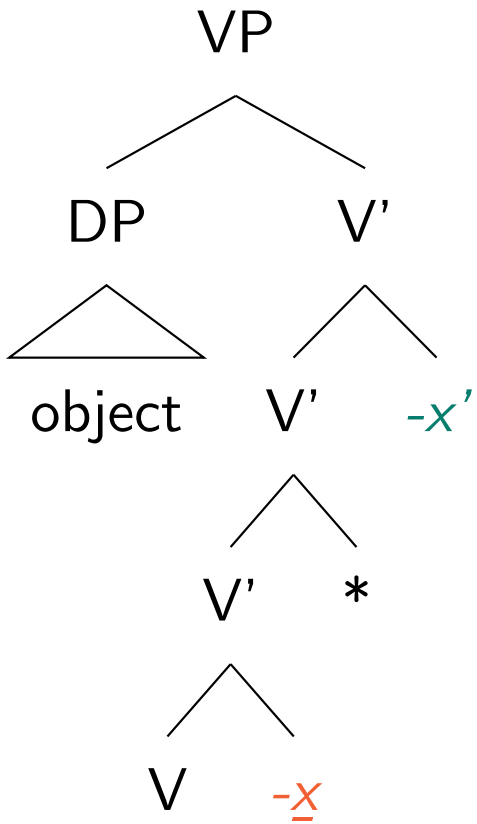
# Surface-order-respecting scope for pluractionals with *

$[\![\text{-}\underline{x}]\!] = \lambda F_{e(st)}.\lambda x_e.\lambda e_s.$ "$e$ is made up of smaller events, each of which is related to $x$ by $F$"

(7) # Ldakát wé táax'aa yax yaxlajákx
all that mosquito(es) EXH 1SG.S.kill.PLUR
Intended: "I'm killing off all the mosquitoes!"
Comment (SJ): Well that's like you're *trying* to.

"$e$ is made of a sum of medium-sized events, and all-the-mosquitoes is a sum of individual mosquitoes; each medium-sized event goes with one mosquito and is made up of several smaller events of killing it"

# Surface-order-respecting scope for pluractionals with *




Reminiscent of Henderson (2012) on Kaqchikel.

# Two possibilities

$*$ < -*x*' < object < -*x*

→ Simpler denotations
→ No cumulative closure magic

-*x* < $*$ < -*x*' < object

→ Respects surface order
→ Parallel with Kaqchikel

Can be empirically distinguished e.g. with distributive numerals Cable (2014); I just don't have the data yet.

# Outline

# Summary

- Pluractional morphology in Tlingit is not required for iterative interpretation.
- A cumulative closure operation higher than the V head but still inside VP can potentially account for surface order and meanings of pluractionals with *ldakát* “all”.
- Cumulative closure may yet be the source of iterative interpretations.
- It is still a mystery why some Tlingit verbs resist unmarked imperfective.

# Acknowledgments


This work was supported by the Fonds de Recherche du Québec and the Jacobs Research Fund.

Thank you and *aatlein gunalchéesh* to my consultants Sam Johnston, Margaret Bob, and Ben Jackson.

Thank you to James Crippen, Bernhard Schwarz, Luis Alonso-Ovalle, and Seth Cable for innumerable helpful comments.

Thank you to Alex Ito, Phoenix Gee-Benwell, and Fiona Smith for data help.

# Appendix: Cannon example

Context: *We've been hearing large booms all morning.*

(12) Gwál ldakát yá yakyee wé óonaa
maybe all this day that cannon
al.únx'w.
3>3.shoot.MULTARG
"Maybe today they're firing that cannon all day." (BJ)
Comment (BJ): Just one cannon.

Puzzling given how strongly *-x'* seems to associate with plurality:

(13) diÿát'x'
MID.STV.long.MULTARG
"[Several things] are long - are very long" (Leer, 1976)

(14) aklahútl'x'
3>3.wrinkle.MULTARG
"[wrinkling it into] little bunches here and there"
(Leer, 1976)

# References I


Beck, S., & Sauerland, U. (2000). Culmination is needed: A reply to Winter (2000). *Natural Language Semantics*, *8*, 349–371. doi: 10.1023/A:1011240827230

Burge, H. D. (2024). *Woosh jín toolshát yeisú, we're still holding each other's hands: relationships and revitalization in Lingít country* (Doctoral dissertation, University of British Columbia). doi: 10.14288/1.0439964

Cable, S. (2014). Distributive numerals and distance distributivity in Tlingit (and beyond). *Language*, *90*(3), 562–606. Retrieved 2024-03-29, from `http://www.jstor.org/stable/24672039`

Crippen, J. A. (2019). *The syntax in Tlingit verbs* (Doctoral dissertation, University of British Columbia). doi: 10.14288/1.0388221

# References II

Dölling, J. (2014). Aspectual coercion and eventuality structure. In K. Robering (Ed.), *Events, Arguments, and Aspects: Topics in the Semantics of Verbs* (pp. 189–226). John Benjamins. Retrieved from https://doi.org/10.1075/slcs.152.05dol doi: 10.1075/slcs.152.05dol

Eggleston, K. (2017). *Online Tlingit verb dictionary: A database of over 1,100 conjugated Tlingit verbs.* Retrieved from http://ankn.uaf.edu/~{}tlingitverbs/ (Unpublished online resource)

Henderson, R. (2012). *Ways of pluralizing events* (Doctoral dissertation, University of California). Retrieved from https://escholarship.org/uc/item/7zj310p2

# References III

Kratzer, A. (2008). On the plurality of verbs. In J. Dölling, T. Heyde-Zybatow, & M. Schäfer (Eds.), *Event structures in linguistic form and interpretation* (pp. 269–300). Berlin, Boston: De Gruyter. Retrieved 2024-02-20, from https://doi.org/10.1515/9783110925449.269 doi: 10.1515/9783110925449.269

Krifka, M. (1992). Thematic relations as links between nominal reference and temporal constitution. In I. A. Sag & A. Szabolcsi (Eds.), *Lexical matters* (pp. 29–52). CSLI Publications. Retrieved 2024-02-20, from https://semantics.uchicago.edu/scalarchange/krifka92.pdf

Lasersohn, P. (1994). *Plurality, conjunction and events*. Springer Dordrecht. Retrieved from https://doi.org/10.1007/978-94-015-8581-1 doi: 10.1007/978-94-015-8581-1

# References IV


Leer, J. (1973). *Tlingit stem collection.* Retrieved from `https://www.uaf.edu/anla/record.php?identifier=TL962L1975n` (Unpublished manuscript, ANLA ID:TL962L1975n)

Leer, J. (1976). *Tlingit verb catalog.* Retrieved from `https://www.uaf.edu/anla/record.php?identifier=TL962L1974h` (Unpublished manuscript, ANLA ID:TL962L1974h)

Levin, B. (2009). *Lexical semantics of verbs iv: Aspectual approaches to lexical semantic representation.* University of California, Berkeley.

Ojeda, A. E. (1998). The semantics of collectives and distributives in papago. *Natural Language Semantics*, *6*, 245-270. doi: 10.1023/A:1008289808782

Rothstein, S. (2004). *Structuring events*. Blackwell.

# References V

Sampaio, T. O. d. M., & França, A. I. (2018, jun.). Event-duration semantics in online sentence processing. *Letras de Hoje*, *53*(1), 59–69. Retrieved from https://revistaseletronicas.pucrs.br/fale/article/view/28695 doi: 10.15448/1984-7726.2018.1.28695

Smith, C. (1997). *The parameter of aspect*. Springer.

Swanton, J. R. (1909). *Tlingit myths and texts*. U.S. Government Printing Office. (ANLA ID:TL901S1909)

Twitchell, L. A. (2018). *Haa Dachxhánx'i Sáani Kagéiyi Yís: Haa Yoo Xh'atángi kei Naltseen, for our little grandchildren: Language revitalization among the Tlingit.* (Unpublished doctoral dissertation). University of Hawai'i at Hilo.

# References VI

Wilhelm, A. L. (2007). *Telicity and durativity: A study of aspect in Dëne Suliné (Chipewyan) and German*. Routledge. Retrieved from https://doi.org/10.4324/9780203943908 doi: 10.4324/9780203943908